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ABSTRACT

This qualitative study examined experiences of 139 individuals with doctoral degrees to identify factors that inhibit and/or facilitate students' success in doctoral programs. The study used an e-mail survey which asked about personal background, entry/structure of degree, university/other support, supervision of program, the process, and overall effects. Individual chapters of the report discuss the overall design of the investigation, the participants and their backgrounds, entering a doctoral program, completing the doctorate, formal and informal aspects of the process, overall effects of the doctoral experience, and learning from and improving the doctoral experience. Factors identified as hindering doctorate completion included financial difficulties, family lifestyle problems, cultural difficulties and isolation, and problems dealing with university administration. Suggestions for improving doctoral programs and the doctoral experience address the importance of a pro-active, sympathetic approach to student recruitment; induction into the academic community and the relevant discipline; meeting the needs of a diverse student population; better linking of students and faculty members; preparation and support for supervisors; clarification of roles and expectations; power relationships and politics; flexible pathways; feedback and validation; and maintaining relationships beyond completion. (Contains 10 references.) (DB)

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THE DOCTORATE: TALKING ABOUT THE DEGREE

STEVE DINHAM & CATHERINE SCOTT

SEPTEMBER 1999

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AUTHORS

Dr Stephen Dinham is Associate Professor within the School of Teaching and Educational Studies, UWS, Nepean. Phone: +61 2 47360275; Fax: +61 247360400, email: s.dinham@uws.edu.au; Mail: TES, UWS Nepean, PO Box 10 Kingswood, NSW 2747 Australia.

Dr Catherine Scott is Co-ordinator of Research Development at the University of Western Sydney, Hawkesbury. Phone: +61 24570 1574; Fax: +61 24570 1686; Email: c.scott@uws.edu.au Mail: Locked Bag 1 Richmond NSW 2753 Australia.

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FOREWORD

The doctorate is for many the equivalent of Everest. Despite the fact that the mountain has been climbed many times, it is still the world's highest point and remains a daunting, challenging undertaking, particularly for the sole climber. Once entry to a doctoral program is negotiated, there are numerous pitfalls along the route to the summit. For those who reach their final destination, while there can be euphoria and a sense of fulfilment, in time this can be replaced by a feeling of let-down, disappointment and a questioning of what has actually been achieved.

There is a price to be paid by all involved in undertaking and supporting the doctoral process, and sometimes this proves too much to bear, in terms of personal and financial resources and time. There is pressure on universities to reduce completion times and attrition from doctoral programs, yet many fail to complete the journey despite the support that might be offered to them and their own motivation to succeed.

This book and the study it documents began with informal conservation. We both had completed doctorates and were reflecting on the process and how it had affected us and others around us. As well as feelings of accomplishment and satisfaction, we discussed such matters as the problems associated with being accepted into a program, of working with supervisors, and of satisfying the requirements for the degree. At the time, we were still working through in our own minds what it really meant to be now called 'Dr'. While some had congratulated us and understood the achievement, others failed to notice or were even contemptuous. In the words of one of our colleagues who had recently completed a doctorate, 'no one clapped when I entered the room or walked down the street'.

Working in universities, there was pressure to complete a doctorate for our own security and advancement, but little real support for what is a very solitary undertaking. We both agreed, however, that we had done the degree for ourselves, and not for others or for other purposes.

Looking around us, we saw colleagues who had been toiling over their doctorates for years, often abandoning the quest for long periods of time, even permanently. Some had completed their doctorate and then moved in a totally new direction, while others used their degree as a platform for further work and the building of a career. In some cases, people appeared to have redefined themselves following the award of their doctorate, becoming almost different people. However, some were disparaging and even bitter about what they had achieved. Relationships had foundered. One, recently separated, had even thrown his newly won degree on a backyard fire. However, we never had the time nor opportunity to probe more deeply the feelings of those we encountered in our day to day interactions, even if we could have opened up discussion on such a personal matter.

As we thought about the issue, we became enthusiastic about exploring the experiences of those who had successfully negotiated the doctoral process. There are quite a few very useful publications on how to complete and

'survive' a doctorate, and how to undertake the various tasks this involves, such as gaining admission to a program, narrowing a topic, reviewing the literature, and guidance for supervisors and committees. There are also many books on aspects of methodology. We acknowledge and draw upon these sources although it was not our intention to provide a detailed review of the literature.

More importantly to us, we wanted to 'get inside' the doctoral experience from an individual perspective. We wanted to obtain a wide ranging sample of successful doctoral candidates - geographically, temporally, from different types of programs and different disciplines and personal backgrounds. We wanted to identify those features of the doctoral experience which appear to be universal and those which are possibly more contextual and even idiosyncratic. We were keen to test the idea that doctoral success might be as much to do with fitting into the institution (Tinto, 1975) as it was about fitting the doctorate into one's personal life (West, Hore, Bennie, Browne, & Kermond, 1986). We were also keen to use our understandings to improve the doctoral experience for all concerned and to reduce the costs and loss mentioned previously.

What follows are the experiences, feelings and views of 139 people who took part in our study, some whom had completed their doctorates decades ago and others only recently. We have set out our record of the study in a fairly logical and we hope accessible and useful manner, but overall, there is a strong reliance on our doctoral holders thinking about and articulating their feelings and experiences. We believe that there are some powerful messages in these accounts for all who have been, currently are, or will in the future somehow be involved in the doctoral experience.

While we draw on our study to offer suggestions for improving doctoral programs, we stress the importance of recognising that fundamentally, the process is about the dynamic interaction of individuals within the contexts of disciplines, departments and faculties, and society.

CHAPTER ONE

AN INVESTIGATION OF THE DOCTORAL EXPERIENCE

Introduction to the Study

As noted in our foreword, this project arose because of our desire to explore the experiences of a range of successful doctoral candidates. We wanted to make the study an international one, and to include graduates from different 'models' of the doctoral degree. Because of our intention of exploring in some depth peoples' individual experiences, we settled on a research design incorporating open-ended questions designed to assist people to 're-live' the doctoral process and to reflect on how it had affected them, both at the time and subsequently.

We wanted to explore and reveal both the factors inhibiting and facilitating students' success in doctoral programs. By drawing on an international sample of people from different doctoral systems, disciplines and elapsed time since completion, we hoped to discover those features of the experience of doctoral study which might be universal and those which are more contextual and personal. Through drawing on the collective experience of such a sample, we hoped to provide potential students, current students, doctoral supervisors and others with insights and guidance into the process of completing a doctorate.

Non-completion of programs of tertiary study is costly for students and institutions, and ultimately society. As a result, student attrition has been for several decades a major area of study for theorists of higher education (see below). However most research has been concerned with undergraduate, 'traditional' age students whose situations are dissimilar in important ways to those of postgraduate students.

Student Integration versus Study Integration

More recently researchers have investigated the situations of older students and have begun to explore the factors which make for successful postgraduate study. The model most widely used for this purpose is that developed by Vincent Tinto (1975). Tinto suggests that student attrition is predicted by failure to achieve integration into the institution of enrolment. Tinto proposes that integration has two sub categories - academic integration and social integration. West and his colleagues (1986) investigated attrition amongst traditional and mature age students, and concluded in agreement with Tinto that for school leaver students the challenge is indeed 'fitting into university', but for older students it is more about 'fitting university into one's life'.

The challenge for the doctoral student is a combination of the challenges faced by the younger student and the mature age student. The doctorate is a vocational preparation and as such serves as an induction into the profession of researcher/academic, although many doctoral holders will not use their degree for this purpose. 'Professional' doctorates in areas such as education and business administration which are becoming more common serve a different purpose again.

Whatever the intended purpose of the doctoral degree, the process requires of the student a considerable amount of 'fitting in' to the institution. However, the doctoral student is usually classifiable as 'mature age' - often 25 or more - and as such often has more life responsibilities than an undergraduate. Thus he or she is faced also with 'fitting the degree in' to his or her life and commitments. There is also the phenomenon of the expansion of part-time candidacy at the doctoral level which can require even more 'fitting the degree in', while also making it more difficult to 'fit in' to the institution where study takes place.

We hoped that both difficulties of 'fitting in' to doctoral programs and 'fitting the doctorate in' would be linked to and explained by contextual features - features of specific higher education institutions, doctoral programs and of individual lives. Some previous attempts to provide advice for doctoral students and supervisors have been 'how to' in their approach and have largely ignored contextual factors in favour of a process approach which outlines, for example, how to select and gain entry to an institution, how to choose and narrow a topic or how to write up a thesis. Not tackled are potentially difficult issues such as the candidate/supervisor relationship and the possible impact of faculty politics and family issues on the progress of doctoral studies. We were keen to explore structural and process issues, but we were also very interested in these other contextual matters.

Recent Proliferation of the Doctorate

Holbrook and Johnston (in Holbrook & Johnston, 1999: 3-6) note that despite the long lifespan of universities, postgraduate student supervision has a much shorter history, with the original PhD award originating in Germany in the early 1800s. However, it has only been since the 1970s and 1980s that the number of institutions offering doctoral programs and the number of people attempting and possessing doctorates have increased to anywhere near their present levels. In fact, in many higher education institutions, academics themselves holding the qualification were in the minority until comparatively recently.

With the great expansion of both doctoral programs and doctoral candidates over the past three decades, the key question of 'quality control' arises, along with the related issues of student attrition, lengthy completion times, personal, institutional and national cost and the 'value added' by the study and research undertaken. It is not surprising that greater attention is being focussed on these and other matters of 'quality' and 'accountability', with resultant increased pressures on all concerned with the doctoral experience and process.

The Still Neglected Issue of Supervision

As we have noted earlier, there are many 'how to' books and articles on undertaking postgraduate student research which attempt to set out procedures and practices for both students and supervisors, and while these are valuable, their very 'objectivity' can result in an over-simplification of what remains at the centre as an intense and vital inter-personal relationship. As we shall see when the doctoral experiences of those taking part in the study are examined, the student-supervisor relationship has the potential to be wonderfully enriching and productive, but it can also be extremely difficult and even personally devastating.

Context, personalities, prejudices and politics can all play their part in influencing the nature and quality of the relationship between supervisor and student and no amount of procedures and regulations can ever remove such intangible, subjective matters. Students are far from being a homogeneous group, as are their supervisors and advisers.

As well as politics, there is also the issue of power. Students are relatively powerless, while supervisors have the power to block, guide, push and divert (although as we shall see, some supervisors are also at the mercy of unequal power relationships within departments and faculties). They can build obstacles more easily than they can remove them in many cases, yet ultimately, it is the student who must accept the responsibility for his or her success or failure.

The academic culture is a distinctive, even alien one which takes time to understand and come to terms with, and although every faculty, department and university has a certain amount in common, each is also unique due to matters such as personality, accumulated history and present pressures, opportunities and threats. Dealing with this unique richness is not easy (Parry & Hayden, in Holbrook & Johnston, 1999: 36-37).

As noted above, a further difficulty and reality for many postgraduate research students today is that the undertaking of a doctorate is often part-time, with the needs to earn an income and maintain personal relationships balanced against the demands of a doctoral program. There are also additional pressures and challenges involved such as adapting to a new culture for many students. Something as basic as 'homesickness' should not be underestimated in terms of its possible deleterious effects on doctoral success.

In short, there is no simple 'recipe' or prescription for doctoral success as each candidate and his or her supervisors create a unique dynamic teaching/learning context, the nature and ramifications of which we must attempt to understand.

Barriers to Completion and Doctoral Attrition

A considerable proportion of students who commence a research doctorate never complete it and this phenomenon is not new (Moses, 1985). In a goodly proportion of cases 'dropping out' follows taking leave from the degree (Powles, 1989) and presumably as a consequence of the same reasons that led to the decision to take leave.

Powles (1989) conducted a study of the 1979 doctoral cohort from University of Melbourne exploring why candidates for research PhDs may take a very long time to complete or fail to complete altogether. Her findings are undoubtedly still of relevance.

It should be noted that reasons for leaving a doctoral program are not always negative - some candidates leave because of a change in career direction or to continue studies at another institution or overseas.

However, most reasons for attrition identified by Powles come under the general heading of 'difficulties'. Many problems are ones of overload - combining family responsibilities and study or work and study being common examples. Changes in the balance of 'load' may also be crucial. Changing jobs or increasing hours worked, or increased family responsibilities through illness, marital separation or the birth of children may all tip the balance against completion. Lack of support or outright hostility from family or other 'significant others' may also have a prejudicial effect on completion. Of course, lack of money also drives candidates out of study before completion.

Other reasons are connected to the institution of enrolment or to supervision of the degree. Inadequate or missing equipment, inadequate 'bench' space in laboratories, poor library resources and lack of funds for consumables, travel and fieldwork can all pose insurmountable problems. Lack of a research culture or 'critical mass' of researchers may lead to isolation and a lack collegial support for doctoral students. The issue of isolation is frequently worse for humanities/social science students compared to 'hard' science candidates as the latter frequently conduct their research as part of an ongoing research team, an unusual situation for the former.

Other problems may arise because of the wider context within which a University finds itself, particularly the current and wide-spread context of budget cuts to higher education. Students may find themselves unable to complete their degree because of reasons such as unanticipated loss of financial support, departure of a supervisor for another university or from academia altogether, or closure of their department due to budget cuts (Kerlin, 1995).

Supervisor-related problems which can prove inimical to successful completion include incompetence, inadequate supervision or frank neglect, incompatibility between supervisor and student and even misuse, exploitation and/or bullying of the student. Lack of concord over aims, methods and the details of the research are also potentially hazardous to successful doctoral study.

Kerlin (1995) presents students' perspectives on some of the ways student-supervisor and student-institution relationships can go wrong:

> 'Students often describe the doctoral process as more "political" than intellectual in nature. A number of respondents to a survey I conducted commented that they entered the doctoral years with hopes of being intellectually nurtured, only to experience a kind of "hazing process" in which they were subjected to rules of conformity and compliance that had never been made explicit ahead of time. Sometimes these rules were rationalised by faculty as "part of the department's way of doing things", and sometimes they were unarticulated and arbitrarily or capriciously applied by individual faculty or advisers.'

Candidates' characteristics have also been cited as sources of attrition (Powles, 1989). These include lack or loss of motivation, poor preparation or lack of expected skills and knowledge and difficulty 'fitting in' to the course or institution.

The explanation for attrition is rarely straightforward and as Powles (1989:23) comments:

> 'Higher degree students' reasons for discontinuing are invariably complex and interactive. "Official" reasons belie the complexity, and academic staff emphasise different facets to the students themselves. Although some of the major factors are, from the University's viewpoint, largely beyond intervention as they have to do with career decisions and/or life cycle considerations, a vital question is that if other aspects of candidature that can be influenced by the institution had been different, might students have stayed onto submit theses?'

The Present Study: How We Obtained Our Sample

Those taking part in the study were contacted and surveyed through what is possibly an unusual process but one which will no doubt become more common.

While in some ways it might have been preferable to conduct interviews, given the international scope of the study, face to face interviews were obviously not feasible, while telephone interviews would have posed problems of logistics and cost. Thus, some form of survey was needed.

We decided to survey respondents not by the usual means of pen and paper, but through an electronic mail/email iterative process. This has a number of potential advantages for the researcher and the person being surveyed. Email is obviously far quicker than post and the respondent has the opportunity to write as much as he or she likes, not being limited by space on a printed survey. Corrections can be easily made by the respondent, while material can be readily added or deleted after a period of reflection.

More importantly, the data returns to the researcher as text in the subjects' own words and can easily be 'cut and pasted' into word processing programs, databases and spreadsheets for recording and later analysis. This saves substantially on transcription

costs and also means there is less chance of inaccuracy through having to decipher handwriting or interpret what is being said. Everything is a direct quote - unless stated as being 'off the record' - which happened several times in this study - so paraphrasing and data reduction is not the problem it can be when data entry or transcription occurs using other techniques.

Email also means that there can be quick turnaround where it is necessary to clarify or further explore a point raised in a response, hence the iterative nature of the process. In this study, there were a number of instances where emails went 'back and forth' until both parties were happy with the survey responses.

Email also makes it possible to contact a far greater number of respondents more cheaply and quickly than is possible using other methods.

In mid to late 1995, once the survey questions had been formulated (see below) and a successful pilot had taken place using the email survey technique with four doctoral holders, the study was 'posted' on numerous international email 'bulletin boards', special interest groups and the like. Those encountering news of the study in this way were encouraged to re-post the message using their own networks and contacts in what is essentially a 'snow ball' or cascading effect.

Our Original Message

> Have you completed a PhD/Doctorate? If so, we would like to survey you via email regarding your experiences for a research project. We care hoping to make contact with a range of people internationally and from a range of disciplines to thoroughly explore the 'PhD experience'.
>
> Those who reply to our request will be emailed a survey as an attachment which can be completed and returned to us. Naturally, confidentiality will be assured and it will be impossible to identify any respondent in presented/published work arising from the project.
>
> Please pass this request on to any email networks/SIGs that you belong to.
>
> Please reply to this message if you would like to share your experiences with an international audience and/or find out more about the project.
>
> Thanks, Steve Dinham & Catherine Scott

Over 200 replies were received from doctoral holders, others not yet completed or from people simply interested in the project. These people were told more about the project in a follow up email message. Those who responded positively to this second message were then sent the email survey to complete.

There were two problems encountered with this process. The first was that in a small number of cases email addresses originally supplied were not contactable and messages 'bounced' back for various reasons, while there were problems using an attached document for the survey, with either the blank survey or the completed instrument being unreadable at either end in some instances. Eventually, we resorted to placing the survey questions directly within an email message, rather than as an attached document, which overcame this problem (although particularly lengthy responses sometimes came back to us in two or even three messages).

These problems are probably less prevalent now, as the use of attached email documents and the compatibility of different word processing and email systems were still under development inn 1995-6 at the time the survey took place. There was also an additional problem, in that some of those who completed our survey are now not able to be contacted - we had intended to give each participant a summary of our findings in return for their involvement - as they are no longer at their former email address, and many could not be contacted in more conventional ways because they chose not to supply full contact details when replying to initial messages.

The Email Survey

There were two parts to the email survey - closed items intended to provide background data and open-ended questions (see end of Chapter). There were six parts to the extended-response section which were derived from the findings of the literature and our own interests in the doctoral process:

1. Personal Background
2. Entry/Structure Of Degree
3. University/Other Support
4. Supervision Of Program
5. The Process
6. Overall Effects

Completion and Return of the Surveys

Of the 200 or more initial inquiries, there were 139 completed surveys returned, including the original four pilot responses. As noted, there were problems associated with changed or inaccurate email addresses, and no doubt some who could not decipher the survey when it was in attached document form decided not to proceed further. Some also found it difficult to put the time aside to complete what is quite a demanding reflective survey, and there were several apologies from people in this category. Several others found the process emotionally difficult, and did not proceed far past the closed questions. Nevertheless, by late 1995 there were many completed email surveys arriving each day, with the final surveys arriving in early 1996.

Analysing the Data

As noted, because the data arrived as 'verbatim' text, there was little that needed to done prior to data entry, aside from some simple 'cleaning' of the data to bring it into a standard font, case, etc., and to correct or standardise spelling. Closed respondent data was entered into a spread sheet, while answers to the open-ended questions were 'cut and pasted' into the NUDIST software program (QSR, 1994) by our research assistants for analysis.

Reflections on The Process

Apart from minor technical problems, the method of obtaining a sample and surveying using email seems to have a lot of potential. Those responding can take their time over open-ended questions and the degree of thought and reflection this can facilitate is evident in many of the comments to be found in the transcripts and later chapters. As noted, the benefits of receiving what are direct quotes in text are considerable in terms of time, cost and accuracy.

Obviously, there are still many people without access to email, although this proportion is probably shrinking rapidly, and the matter of obtaining a 'true' stratified random or representative samples might be considered by some to be problematic, but overall the methodology offers a viable and useful alternative to other more traditional methods. In time, further technological advances will enable even greater advantages, such as international electronic focus groups and video interviewing where the spoken word is converted directly into text which can then be imported into data analysis programs.

Finally, there is something very exciting and even humbling about being invited to share another's life experiences and feelings. We hope that you will find these as interesting and valuable as we do.

Chapter Two now considers those taking part in the study and their backgrounds.

Survey Questions

A. Demographic/Respondent Data

1. Male/female:
2. Age:
3. Country of residence:
4. Nationality:
5. Exact title of qualification (e.g., PhD, EdD, DLitt, etc) :
6. Country where doctorate undertaken:
7. Age when you completed your doctorate (i.e., all final corrections made):
8. Year you received your doctorate:
9. Time taken (years) to complete doctorate (including leaves of absence):
10. Percentage of completion time that was:
    1. Full time study: %
    2. Part-time study: %
    3. Breaks in study/leave of absence: %
11. Please provide up to 3 one or two word descriptors to describe the field/content of your doctoral thesis/dissertation:
    1.
    2.
    3.
12. What is your current occupation(s)? :
13. Please describe your family circumstances (i.e., marital status, children):
    1. During your doctoral study-
    2. Now-

B. Extended responses

1. Background

14. Briefly describe your personal background (e.g., family background, educational history, educational level of other family members) and career history prior to entering your doctoral program.

2. Entry/structure of degree

15. What were your major reasons for undertaking a doctorate?

16. Were there any factors hindering your undertaking of a doctorate (e.g., personal, financial, cultural, labour market factors, others?)

17. Did you face any difficulties being accepted into a doctoral program? If so, what were these and how did you overcome them?

18. Did you have to complete a qualifying program? What form did it take? How long did it take? Your opinion of this program/requirement?

19. Why did you elect to study at the university/faculty where you completed your doctorate? What factors influenced your choice?

20. What form did your doctoral program take (e.g., dissertation only, dissertation plus course work - if so, proportion which was course work?)

21. How did you select your thesis/dissertation topic/area of investigation? Did this present any difficulties?

22. Were there any difficulties in gaining approval for this topic? If yes, please elaborate.

3. University/other support

23. How did you support yourself financially during your doctorate? (e.g., full and part time employment, scholarships/grants, income of partner, etc.). Did this present any problems, e.g., payment of fees, support of self/family, other expenses?

24. What facilities did your university provide to complete your doctorate (e.g., office space, lab time, travel assistance, computing, other technology, etc.). Were these adequate for your needs? If not, why not?

25. How well would you say you fitted into/were accepted and supported by your faculty during your doctorate?

4. Supervision of program

26. What form did supervisory arrangements take for your doctorate (e.g., a chief supervisor, a panel or committee)? Did you have any say or choice in this arrangement? Was this arrangement to your liking?

27. Please comment upon both the quality and the nature of the assistance your supervisor(s) provided. Where problems existed in this arrangement, how were they overcome/addressed?

28. What formal/informal contact arrangements were made between you and your supervisor(s) (e.g., regular meetings, lunch, etc)? Were these adequate for your needs?

29. Describe your overall relationship with your supervisor(s). Did this relationship change during the course of your doctorate? How/why?

5. The process

30. What adjustments did you have to make to your personal life while completing your doctorate? What pressures/ difficulties/crises, if any, did you face? How did you attempt to overcome these? Did your faculty/university assist? What were the positive aspects of the overall process?

31. Describe any regular or mandatory aspects/ requirements of your program (aside from course work where this occurred), e.g., presentations by your self and other students, seminars, colloquia. How often did these commitments occur? What is your opinion of their benefit to your doctoral program?

32. Describe the examination/defence process you underwent. Were there difficulties associated with this? How were these overcome?

33. How did you feel emotionally and physically around the time your doctorate was completed/awarded? Have these feelings changed since? Can you identify any stages/phases you have gone through in the time since graduation?

34. How did you go about disseminating the findings of your doctorate? What difficulties did you face and how did you overcome these? Are you satisfied with the extent to which you have achieved publication/dissemination of your findings?

6. Overall effects

35. Overall, what effects has the completion of your doctorate had, e.g., on your health, how you feel about yourself, your family, friends?

36. What effect has the completion of your doctorate had on your career path? What other factors have influenced this (e.g., job opportunities in your field)?

37. Could you sum up what the whole experience has meant for you personally and professionally?

38. Have your doctoral experiences influenced how you undertake your professional duties now, for example, how you supervise doctoral students, teach, etc.?

39. Overall, what do you think are the major qualities a person needs to successfully undertake a doctorate?

40. Overall, what do you think are the major factors contributing to success in a doctoral program?

41. Are there any other comments you would like to make about your doctoral experiences?

CHAPTER TWO

THE PARTICIPANTS AND THEIR BACKGROUNDS

Introduction

This chapter provides a profile of the successful doctoral candidates who took part in the study and the type of programs they completed. We then examine the personal backgrounds of these people, including family circumstances, educational history, educational achievements of other family members and career history prior to entering a doctoral program. Later chapters are concerned with entering a doctoral program, actual completion of the doctorate, and its aftermath.

Those Taking Part in the Study

One hundred and thirty nine people completed the electronic survey, 65 men and 74 women (see tables end of this chapter).

Title of Qualification

The great majority of participants in the study (84%) were awarded the degree of Doctor of Philosophy (PhD), with 11% receiving the degree of Doctor of Education (EdD). The remainder were awarded other forms of doctoral degrees, including one doctorate in medicine and a small number of qualifications from Continental European universities.

Present Country of Residence, Nationality and Country Where Doctorate Was Undertaken

The predominant pattern for the participants was to have lived and studied for their doctorate in their country of citizenship. A small percentage had studied in another country, and these participants were more likely to be men. The bulk of the participants were American citizens who had completed their doctorate in the USA, with Australians who studied 'at home' the second largest category.

Age at the Time of the Survey

Most participants were in the 41 to 50 year age range when they participated in the study, although there was some differences between men and women in age distribution. There were more women (12%) and fewer men (2%) in the lowest age range - 20-30 years -whilst there were proportionally more men in the higher age brackets - 41-50 (men = 42%, women = 39%) and 51-60 (men = 25% , women = 23%). Eight percent of men were aged 61 or more but none of the women were of this age. Given that until recently women were relatively under-represented in doctoral programs (and in some disciplines still are) this relative distribution of ages is to be expected.

Age When the Doctorate was Awarded

Almost half of the participants were aged in their thirties when their doctorate was awarded, with an approximately equal number being in their twenties and forties. Only 4% of people were aged 51 or over at the time their doctorate was awarded. There were, however, once again differences in the age distributions for men and women. Men (54%) were more likely than women (39%) to have completed their doctorates during their 30s, whilst women (32%) were more likely than men (22%) to have

completed their studies in their 40s. In this the particular sample is typical of the population of doctoral holders as women are more likely to complete their studies later in life than men, and to take longer to complete (see below).

When the Doctorate Was Completed

Most participants were recent recipients of a doctorate with 57% having completed their studies in the 1990s. However, one person had completed his degree in the 1950's and 6% had completed their doctorate in the 1960's, 17% in the 1970's and 19% in the 1980's. Again, in this, the sample is typical of the population of interest as, given the 'explosion' in post graduate study that occurred in the 1980s and 1990s, a large proportion of the world's doctorates are recently 'minted'.

Time Taken to Complete Doctorate

The majority of participants completed their doctorate in either three (20%), four (18%) or five years (20%). At the extremes, only 4% took two years and 7%, nine years or longer. Disaggregated by sex, some trends become discernible with the largest category of women (25%) taking five years to complete their doctorates, compared to 15% of men. In contrast fewer women (22%) completed in their studies in 2-3 years, compared to men (28%). Again, in this respect our sample is typical of the larger population of doctorate holders as women take on average longer to complete their degrees than do men. Also noted was a tendency for those who had completed degrees in science or technology areas to take less time than social science or humanities scholars, again a trend congruent with that from the population of interest.

Pattern of Study

Forty percent of participants (39% of men and 41% of women) undertook their study as full time students, whilst another 25% (29% of men and 22% of women) were full time students for the majority of their program. Men (68%) were slightly more likely than women (63%) to study full time for all or most of their program. Twenty seven percent of participants said that they completed all or most of their degree part time, while 7% indicated that they had completed their doctorate with equal amounts of full time and part time study.

Most participants (78%) had no breaks or periods of leave from their studies during the completion of their doctorate. Almost equal percentages of women (20%) and men (23%) interrupted their studies.

Family Circumstances

During Study

Considerable differences in marital status and family circumstances characterised male and female participants during the time they were completing their studies. Men (84%) were much more likely than women (53%) to be married although there was less difference between men and women on parental status with 49% of women and 55% of man having the care of children during their doctoral program.

At the Time of the Survey

At the time the survey was conducted, the differences in marital and parental circumstances had narrowed but not disappeared with 82% of men and 68% of women

married or in defacto relationships, and 68% of men being fathers and 67% of women, mothers. More men (71%) than women (54%) had maintained the same or similar marital/family circumstances between graduation and completing the survey. Most changes were accounted for by partnering or the birth of children, although some relationships did break down and a relatively few participants reported a number of alterations of circumstance as having occurred, i.e., marriage followed by divorce, childbirth followed by separation.

Current Occupation

The majority of participants were employed in universities in some capacity, not surprising given that the doctorate is for many a preparation for a career in higher education. Sixty five percent of participants described themselves as either academics (69 individuals) or researchers (21). A further 16 participants were in some form of administration, usually in a university, four were retired or not working and 29 were in other occupations.

Summary

The participants in our survey were in many important respects typical of the population from which they were drawn - doctoral holders. The exception to this generalisation is the 'over'-representation of women in the sample. However, the greater willingness of women to participate in research studies is well known. This aside, participants were more likely to be recent graduates, expected as the enrolments in doctoral degrees has increased markedly in recent decades, and patterns of completion times paralleled known facts, with women tending to take somewhat longer to complete their degrees, and holders of doctorates in science/technology fields having completed study faster, on average, than those from other disciplines.

Given that the participants were successful post graduate students, the differences between men and women in marital and family status are interesting. Whilst comparative figures for non-graduates are not available, amongst this group, marriage/partnering was more typical of men, whilst the women have a comparatively low rate of marriage/partnering. This greater convergence from 'traditional' patterns amongst the women is also reflected by their comparative over-representation amongst the single parent participants.

Personal Backgrounds of Those Taking Part in the Study

Our interest in the family and personal backgrounds of our respondents was an attempt to see how influential socio-economic factors, role modelling and encouragement - and even opposition and adversity - might have been in motivating those surveyed to undertake a doctorate.

Family Background and Influence

Around half of those surveyed made some form of comment about the influence or absence of role models in their decision to pursue a doctorate. Thirteen respondents mentioned their partner or siblings as being a role model, while 32 saw one or both of their parents performing this role. There were 23 respondents who commented that role models had not played a part in their decision to undertake a doctorate. Men and women were fairly equally represented in each of these categories.

Considering the influence of family role models further, in seven cases fathers and in one case a mother had completed a PhD, while three fathers and eight mothers had a

Masters degree. Overall, there were 25 fathers who were college graduates and 20 mothers. In 13 families all immediate family members - parents and siblings - had some form of tertiary education. One man said he was 'the fifth generation college graduate in the family'. Another spoke of the fact that 'I am from a teacher family. All siblings have a Dr degree, my wife has a MS, daughter has a MS, a son has graduated from Air Force Academy and another son is in Junior college'.

Absence of family role models usually meant that the respondents' parents were not tertiary educated - 50 participants noted that one or both of their parents had no tertiary education and of these 16 had parents who had not completed high school. Thirty five participants (18 women and 17 men) were the first person in their family to go on to tertiary education.

Some respondents with no family history of tertiary study came from very poor backgrounds, including some whose parents were impoverished migrants. However, this is not to say that education was not valued or encouraged, as in some cases it was clear that education was seen as vital in improving the prospects of the next generation, although parents themselves might not have been well educated nor understood the intricacies of education systems:

> 'My family came from Russia and I grew up in Brooklyn, NY. We were a very poor family. No one in my parents' generation completed high school but in my generation we have two PhD's, a lawyer, two salesmen and a mechanic. It was a warm and wonderful place to grow up and a love of learning was instilled in all of us'.

In other cases, education was a means of breaking free from social stereotypes and restrictions:

> 'I come from a small Canadian town 'in the bush' where women had four career choices: marriage, teaching, nursing and office or store clerical work. Women were supposed to stop waged employment when they had children'.

Another woman described her background as:

> 'Non academic middle class [which placed] little value on sending females to higher education'.

However, even when a tertiary education had beenaccomplished, this did not guarantee a change in family attitudes, as one woman found:

> 'My degree not too much respected in the male side of the family'.

Breaking free also involved some opposition, one man stating that:

> 'My parents are not college graduates, and were anti-intellectual'.

Previous Employment

There were 112 people - 80% - who provided information about their career history prior to undertaking a doctorate. Most of these had been employed in school teaching or at a University in either the academic or administration sides. Fifteen participants had been employed in health related jobs and four in engineering. Nineteen participants reported that they had worked in many different jobs prior to undertaking their doctorate.

We can say little of how typical these career backgrounds might be as those working in universities, schools and the health industry are likely to have access to email networks and thus might have been more likely to hear of the project and participate, but certainly, the completion of a doctorate for those working in these areas is important for career advancement and status. Working with other professionals in an environment such as a school, university or hospital might also help to facilitate success in tertiary study.

Chapter 3 picks up the latter issue and examines the reasons for undertaking a doctorate and choosing a particular university, as well as the factors that some believe hindered their entry to a doctoral program.

Table One: Country of Residence, Nationality and Where Doctorate Was Undertaken

Country of residence		Nationality	Country undertaken
	%	%	%
USA	59	56	58
Canada	04	05	05
Australia	30	25	18
UK	02	06	05
NZ	03	04	04
Other	02	04	03

Table Two: Age at the Time of the Survey, by Sex

Age	%age		
	Men	Women	Tot
20-30	02	12	07
31-40	25	26	25
41-50	42	39	40
51-60	25	23	24
61+	08	0	06

Table Three: Age When the Doctorate was Awarded

AGE	%age		
	Men	Women	Total
20-30	23	23	23
31-40	54	39	46
41-50	22	32	27
51-60	02	05	04
61+	00	00	00

Table Four: Decade When the Doctorate was Awarded

Decade	%age
1950s	01
1960s	06
1970s	17
1980s	19
1990s	57

Table Five: Time Taken to Complete Doctorate, by Sex

Years	%age		
	Men	Women	Total
2	06	03	04
3	22	19	20
4	18	18	18
5	15	25	20
6	14	16	15
7	11	08	09
8	08	04	06
9+	06	07	07

Table Six: Pattern of Study, by Sex

Pattern	%age		
	Men	Women	Total
All F/T	39	41	40
Mostly F/T	29	22	25
All or Mostly P/T	26	29	27
Half and Half	06	08	07

Table Seven: Marital Status during Study, by Sex

	Children			
	Yes		No	
	Men	Women	Men	Women
Single	0	03	15	30
Married/De Facto	54	35	30	18
Divorced	01	11	0	03

Table Eight: Marital Status at the Time of the Survey, by Sex

	Children			
	Yes		No	
	Men	Women	Men	Women
Single	0	04	09	14
Married/De Facto	65	49	17	19
Divorced	03	14	06	0

CHAPTER THREE

ENTERING A DOCTORAL PROGRAM

Introduction

This chapter explores the 'how' and 'why' of entering a program of doctoral study. It canvasses issues such as reasons for wanting to undertake a doctorate, factors that can hinder acceptance and progress within a doctoral program, choosing a particular university, and selecting and gaining approval for a dissertation research topic. Different models of doctoral programs are also examined.

Reasons for Undertaking a Doctorate

When considering why someone might decide to undertake a doctorate, there are two broad reasons which appear to be important. The first could be described as *extrinsic* motivation, where there is some sort of external influence such as needing the doctorate for gaining employment or promotion. The second could be described as *intrinsic* motivation or personal reasons concerned with achievement, self-fulfilment, wanting to do the degree for oneself and wanting to 'make a difference' through one's work.

For most people, however, both intrinsic and extrinsic factors play their part to varying degrees, as the responses that follow indicate. Enhanced status, such as that conferred by a doctorate, does of course have both intrinsic and extrinsic aspects, as it is as much about how others perceive us as how we perceive ourselves.

Further, in cases where the initial motivation might have been more extrinsic, the tendency from those surveyed was for the person concerned to become more committed to completing the doctorate for his or her own sense of accomplishment and for the person to become more interested and committed over time.

Extrinsic Motivation

Over half those surveyed - 33 men and 41 women - gave what could be described as extrinsic reasons for undertaking a doctorate. These included such things as improving one's career prospects and options, gaining enhanced credibility, and completing what is considered a rite of passage within certain professions.

Most people who mentioned some form of extrinsic motivation thought in terms of career improvement (13), advancement and promotion (21), and the fact that a doctorate was considered necessary for getting a job in a higher education (24). Needing a doctorate to pursue a research career was mentioned by 11 people. Only four people saw gaining a higher income through completion of a doctorate as being an important motivating factor in their decision to enrol in a doctoral program.

Other reasons given by those surveyed included undertaking the degree because someone had advised them to, and to show others that or she could complete a doctorate. Two people said simply that the opportunity arose and it seemed the right thing to do at the time, while seven people said pragmatically that it was the next logical step in their career.

Intrinsic Motivation

Around 60% of those surveyed - 39 men and 44 women - gave what could be termed as intrinsic reasons for undertaking their doctorate, sometimes in conjunction with other extrinsic reasons.

The most common reason given was a desire to follow and study in greater depth an already interesting and well liked field of study (26). The desire to learn was mentioned by 15 people, while 11 spoke of the intellectual challenge involved. Often, comments about personal goals and satisfaction were mentioned in conduction with these reasons.

Some people said they liked academic life and wanted to continue studying, while others said they were bored with work and wanted a stimulating change. Wanting to teach an area found fascinating and considered important, wanted to improve one's skills, and simply finding study fun and interesting were also mentioned.

What follows are a selection of responses containing in some cases both extrinsic and extrinsic reasons for wanting to complete a doctorate. In each case, age at the time of the study, sex and general field of the doctorate are given. In some comments, the passion and desire is obvious, while in other cases, there is a more calculative feel to the responses, and even resignation. Some appeared to drift into a doctorate. As noted, some who could be described as extrinsically motivated were energised by the experience and experienced mounting intrinsic motivation and ultimately satisfaction.

> 'I wanted to work in higher education administration and could not get a job and was told by everyone I interviewed with to pursue a higher degree, so essentially I went for credentialing.' (28, female, ethnic education)
>
> 'I was bored with work, always wanted to do one. I loved research but hated the public service. I wanted to be called Dr - got sick of the Miss/Mrs/Ms question.' (40, female social work)
>
> 'I wanted to work at a university. However, I also wanted some credibility. As a teacher, one is usually treated like a child by the administration and one's ideas are not considered important or even worth considering.' (45, female, literacy)
>
> 'Sounded interesting and I was unemployed at the time.' (46, male, educational psychology)
>
> 'To learn more about how people learn, to be able to study with particular people, to write a manual for teachers about teaching history and other subjects through the arts, and to be in a position to teach at the college level.' (46, male, education)
>
> 'To gain higher professional standing (in hopes of earning more money and doing more good for society) while continuing to pursue my research interests.' (33, female, psychology)
>
> 'My initial reasons probably have more to do with imitating an uncle I have who has a PhD in psychology. Later, when I needed to drop out of Bell State for financial reasons, it became sort of a personal quest. I felt that I needed to prove to myself that I could finish something I had started.' (35, male psychology)
>
> 'Always wanted to do it and had aspirations to be a Uni prof. My partner was living in New Mexico and it was a reason to 'kill 2 birds with one stone' so to speak. Plus, I was bored.' (32, female, physical education)

'I wasn't ready to come back to Australia after completing my Master's so to stay in Canada I needed to extend my student visa. More importantly though, I had always wondered whether it would be a possibility for me to push myself as far as a PhD. The challenge. Could a shy kid like me from a small town do something like a PhD? Was I out of my league? Or not? I also had/have a romantic view of the University and have been periodically enamoured by the intellects of some influential profs/teachers throughout my education.' (36, female, educational psychology)

'Probably my initial reasons were not good: to show others that I could do it and to improve my chances of advancement in my career as an editor. But I became seduced by the material and began to enjoy the research and the writing up of it. I had no intention of teaching but the first time I tried it I found I liked that too. So now I find myself ready to leave the career I thought I was shoring up by getting a doctorate.' (53, female, history)

'In retrospect, because I saw myself as a brain-work person and wanted to pass the initiation rites. At the time I thought I was mad keen on a research career.' (56, male, marine ecology)

'To be promoted to Lecturer level - I was the only woman and only person without a PhD in the Physics Dept.' (56, female, physics)

'I had always loved being at [university] and knew that I wanted to have productive and interesting work outside the home, unlike my mother. I could see that my female professors had much discretionary time - could work at home as well as school, etc. My other love was medicine, but I felt it would not be possible to have a full-time medical practice and have a family, and so I chose a PhD instead.' (48, female, psychology)

'To develop my critical thinking and analytical skills, to have a break from teaching and get paid at the same time.' (48, female, social science)

'Initially to further my personal education. The feeling that I needed to continue to maintain a high level of study as a therapist. Initially I wanted to continue to take courses for my professional growth. However, the process of obtaining the degree were substantially more growth producing than the strict academics.' (51, male, social work)

'Personal ambition and for a career change.' (43, female education)

'Had wonderful master's experience - first time I was challenged in university, enjoyed intellectual challenge of research, felt I was a good teacher at university level, enjoyed freedom of schedule, ability to control own daily schedule and career life - missing from elementary teaching.' (41, female, literacy)

'I was a good student, and that's what good students do.' (50, male, economics)

'I was pretty burned out on school upon receiving the bachelor's, but I always thought I would return sooner or later for more education. I was always taught that you have a responsibility to do your very best, strive for the most you can expect to achieve. I knew that I had the ability to achieve a doctorate, and that not everyone has that ability... so I guess I was driven.' (35, female, psychology)

'Desire to maximise my potential as a professional in allied health/medical education; wanted to realise my fullest potential educationally by exploring a deeper and fuller spectrum of educational content related to teaching and research in education.' (50, female, education).

'Fun and interest.' (32, male, physical education)

'I couldn't see myself working in industry for the next 40 years. I really liked going to college. Most of all, it let me fill a blank spot on my resume while I spent more time at home with my children.' (37, female, educational psychology)

'I loved my field, Social Psychology.' (59, female, psychology)

'I was alarmed at the growing misuse and distortion of information about families in the U.S., particularly in broad legislative initiatives supported by newly politicised 'Christian' groups. In addition, I was concerned about what I saw as the rise in scapegoat politics aimed in particular at minority and non-traditional families, as well as members of stigmatised out-groups, such as gay men and lesbians. I decided to get back in the classroom, armed with information, skills, and a desire to challenge what I perceived as a backlash movement against the social gains of the 1960s. Thirteen years later, I am even more convinced of charge to educators in this country to hold back the tide of blame and intolerance and offer citizens the tools to understand and adapt to rapid and potentially overwhelming social/economic change without resorting to reductionist political movements and punitive policies.' (48, female, social science)

Factors Hindering the Undertaking of the Doctorate

Sixty five per cent of people mentioned factors or events which they believe hindered them in the initial undertaking of their doctorate, while the remainder either made no comment about this issue or stated that they had not experienced any problems or inhibiting phenomena.

While many factors were given, the most common was that of financial difficulties which was mentioned by almost 60% of those who had experienced some form of problem in beginning their doctorate. The next factor most commonly given was related to family life, with such reasons as strain on marriage, having to support others in the family while studying, children to care for, and family health being mentioned. For many, these two issues of financial pressures and family problems were closely related and mutually reinforcing.

Fifteen people spoke of the difficulty of holding down a full time job which was necessary for them to be able to afford to meet the costs of tuition, or having to leave a secure job to undertake their doctorate. There were nine people who felt they lacked the confidence to complete a doctorate and eight who spoke about various cultural hindrances, including sexual discrimination, being in a different country and culture, and parents who were not supportive of education. The other problems were mainly administrative although one person said her low literacy was a hindering factor. Overall, women were far more likely to respond to this question than men, as the comments that follow indicate:

Cultural Difficulties:

'Being a woman in engineering/science.' (30, female, biology)

'Cultural: a lesbian at a Mormon university!! They didn't know about me - it was a personal strain.' (30, female, maths)

'There were only two Latino students in a program with over 100, even though we make up one-third of the state population.' (37, female, educational psychology)

'The significant cultural difference between Australia and the UK was a challenge in the early period of research.' (43, male, Art)

Financial Problems:

'There were financial barriers. I received no fellowships for graduate school but decided to pursue it anyway. I worked three jobs during my first year while going to school full-time. I was working over 70 hours a week to pay my $16,000 tuition plus living and expenses.' (28, female, ethnic education)

'It was hard initially financially but then I got an Australian Postgraduate Research Award.' (40, female, social welfare)

'Financially it was difficult to go from a teacher's salary to a graduate student's. This was especially true because I had a son who was in college and needed financial help himself. It was also difficult, financially and personally because the nearest institution which offers the program I wanted is too far away for me to commute daily. I had to maintain a separate residence there for three years and come home on weekends.' (47, female, ethnic education)

'For financial reasons, I had to continue to maintain full-time employment. This meant that my personal time was almost non-existent. This wasn't easy on my family.' (44, female, medical)

'Personal/financial: divorce and its aftermath in financial terms.' (35, female, history)

'Financial mostly, so I kept my university teaching position after one year sabbatical and studied part time until my last year of PhD work, when I took a Leave of Absence from the University teaching, and completed dissertation work, while teaching part-time for the University at which I completed my degree.' (51, female, science education)

'Nominal-only support from husband, young child, limited extra funds (took out college loan for this purpose, also qualified for a Graduate Teaching Fellowship each of three years).' (54, female, education)

'Yes, the government went through financial difficulties- I tried to hold down university jobs, but they kept cutting them. In addition tuition costs went through the roof!' (39, male, psychology)

Problems Associated With the Need to Work:

'However, at the end of my 3 year contract Lectureship, I entered the outside work force, in a non-university city some three hours drive from the university. This severely hindered progress.' (37, male, psychology)

'Had to fund it from earnings, so could only afford the required one year on campus, then had to work.' (50, female, education)

'I had a new baby and was working fulltime as was my husband so I had to be mad!' (48, female, literacy)

'Began rather late, as I was employed full-time, and it took quite a leap to quit [employment] and become a full-time student.' (48, male, psychology)

Family Hindrances and Problems:

'The size of my family and financial commitment in uprooting and living in the UK without employment was an enormous challenge.' (43, male, Art)

'My family was not very supportive at first. My ex-husband, despite the fact that he had a doctorate, kept telling me I was 'too intelligent' to study one small area. Exactly what was fuelling this reaction on his part is beyond the scope of this response. My parents, especially my mother, thought it was 'foolishness' for me to devote so much time to this undertaking.' (53, female, history)

'The PhD meant that my personal time was almost non-existent. This wasn't easy on my family.' (44, female, medical)

'Personal - my parents were against it. Other members of my family told me I was 'running away from life', I should do something practical, and would never get married, etc.' (42, female, psychology)

'To pursue the doctorate would mean relocating to somewhere and leaving behind the jobs my wife and I had, as well as the friends we had there. To leave behind a secure lifestyle to live in self-imposed poverty does seem like a crazy thing to do.' (35, male, psychology)

'Family commitments were (and are) highly time consuming.' (46, male, economics)

'I had to work out a deal with my children and boyfriends about how much time I could spend with them.' (44, female, education)

'Could have gone overseas (probably Oxford) but family circumstances made this impossible. Could not move at that time with partner and children.' (35, female, maths)

'I had to relocate from Darwin to Canberra at a time when my then husband was relocating from Darwin to Papua New Guinea. We divorced.' (48, female, linguistics)

Personal Hindrances and Problems:

'I knew that 'going to school' meant that I would surrender some control of my learning. That is, I wouldn't have the time to learn new software or read books I selected since I would have assignments for classes. It was a

dilemma as to which would enable me to be a better designer.' (44, female, medical)

'My lack of confidence in ability to do the work.' (48, female, social science)

'First, the coursework and research intimidated me initially and the dread of it all kept me from enrolling for at least 5 years. Second, I wasn't sure I had my wife's support to be essentially absent emotionally and physically for a number of years (even though I wasn't moving out of town to do this). Third, we wanted to start a family and I didn't want two kids at once, i.e., a dissertation and a real baby. Fourth, I had major questions about what I'd do with it when I got it other than adding 'Dr.' before my name on the chequebook - would appropriate opportunities exist? Fifth, did I really want to give up friends and a social life for an extended period of time to do this?' (42, male education)

Some who answered this question maintained they had experienced no hindrances, or had been so focussed that they simply ignored them:

'There should have been, i.e., lack of jobs, but I didn't think about them. Culturally, I was well-supported.' (45, female, literacy)

'I lived frugally, with a part-time job during full-time study. I worked full-time during the 3 years I didn't work directly on my dissertation. I had no responsibilities other than myself.' (50, female, science)

'No, once I made up my mind to pursue my degree I was able to move ahead. I had tremendous support from family and friends. Finances were strained - but not to such a degree that I was unable to enrol in classes.' (55, female, computer based instruction)

'Not really. I moved to a new city which at first was stressful, but I got an assistantship and stipend from the beginning so I could support myself while in school.' (52, female, social science)

'None really. Had a wife and one small child, but I was young enough to ignore the effects of poverty.' (51, male, education)

'No hindrances that I bothered with. I was so focussed that I didn't notice problems - just went and did it. That was either very stupid or very praiseworthy, but in truth I just did not countenance the possibility that I wouldn't finish the degree.' (56, female, marine ecology)

'Not really. I consider myself quite fortunate to have attended a university that guaranteed me financial assistance throughout the duration of my studies.' (36, male, bilingual education)

Choosing the University and Faculty

The reasons most commonly given for choosing a particular university at which to complete a doctorate were, in order: geographic proximity to family (36% of respondents); quality of the doctoral program (28%); the desire to work with a particular supervisor (22%); the reputation of the university (18%); financial assistance provided by the university (14%) and because he or she had worked or studied there previously (8%). Where two reasons were given, the most popular combination was

proximity of the university and quality of the doctoral program. A selection of responses follows:

Proximity, Family Reasons for Choosing the University:

> 'Convenience and quality/nature of program. Because I was employed full time throughout the program and was attempting to continue the role of wife and mother, I was not willing to travel long distances. Fortunately, the program which met my needs was located in my city. Had it not been, I might not have undertaken such a program.' (48, female, education)
>
> 'Primarily because of convenience. I lived in Houston and the University of Houston was the only university in the area that had a doctorate that was related to my interests and had evening classes.' (44, female, medical)
>
> 'They were the only ones willing to take a chance on me. I only applied to schools in or near New York because I thought I might get married (I did) to my boyfriend who lived in the area. That really restricted my choices, but I didn't realise it at the time.' (42, female, psychology)
>
> 'I wanted a University located in major city on a coast (I didn't want to be in a rural community or in the centre of the country, and wanted to be near a Jewish community).' (35, female, psychology)
>
> 'Perth seemed to be a nice city and the fact the state had vast areas of fairly remote and understudied outback were also minor considerations. Most students move to a new university for PhD studies to work with a particular supervisor, but I went to work in a particular place.' (45, male, geology)
>
> 'My sister was already there.' (34, female, genetics)

A Potential Supervisor:

> 'My final choice was made after I talked with a faculty member at one of these institutions. I decided that I wanted to study with him and his colleagues.' (47, female, ethnic education)
>
> 'Availability of supervisors sympathetic to the topic.' (40, female, psychology)
>
> 'The particular supervisor's and the department's theoretical, ideological and philosophical focus.' (43, male, art)
>
> 'I met and worked with (at long distance) my future PhD adviser when he presented a workshop and did work on contract for my previous employer. He encouraged my application to his program.' (50, female, science)
>
> 'I particularly wanted to work with one of my supervisors who has an international reputation in his field.' (38, male, medical)
>
> 'What a stroke of luck to find a compatible supervisor who knew me from my Master's work and was willing to take me through to the PhD level! I really knew very little about the uni or the program I had enrolled in when I left Australia for Canada. As it turned out my supervisor was not only compatible with me but a world renowned authority on her area, a very productive researcher and author, and an absolutely excellent role model for any aspiring academic.' (36, female, educational psychology)

University reputation:

'Stanford had an excellent reputation in communication research.' (63, male, education)

'There are two universities with very strong reputations in Australia for the area of my interest - I did my undergraduate studies at one, and thought I should go to the other for my postgraduate, after a couple of years of working in the industry.' (30, female, biology)

'It is the only research education institution in English-speaking Canada for research such as I had in mind.' (50, female, education)

Quality and Nature of Program:

'The department where I studied was interdisciplinary, including sociologists and anthropologist as well as psychologists. That was my primary reason for choosing it.' (48, female, psychology)

'I thought that the University of Pittsburgh had the best program in my desired field.' (44, male, psychology)

'I chose the University of Western Australia primarily because the Professor of Geology wrote me the nicest letter of encouragement when I wrote to enquire about their PhD program and because the Department of Geology at that university has a good reputation.' (45, male, geology)

'I had a colleague in the doctoral program who vouched for it.' (52, male, literature)

Other Reasons and Attractions for Choosing a University:

'I was more comfortable in a northern United States culture.' (36, male, chemistry)

'He contacted me after I withdrew from University of Wisconsin and offered me a paid research assistantship and himself as a thesis adviser. He was willing to pay me to do exactly the sort of research I had intended from the beginning. It was like manna in the desert.' (34, male, economics)

'The program offered was most congruent with my academic interests and I was allowed to go directly for the PhD without obtaining a master's degree.' (52, male, educational psychology)

'It was the only school that accepted me. The reason that I applied there was because I was a resident of California (cheaper), it was in a beautiful location, and the head of the Psych department was the author of my favourite undergraduate textbook.' (33, female, psychology)

'They told me I would be treated as a person, not a number; offered me a teaching assistantship during residency, which in addition to a small stipend, qualified me for tuition at 1/3 the in-state rate; I liked what I saw and heard when I visited; housing was affordable and I could walk to class; they had the kind of program I was looking for - not necessarily in this order.' (47, male, education)

'Visited campus. Liked area. New graduate education building. Study carrel in office for me. Room to study available for me with a key in the library. Knew faculty - worked with a faculty member.' (50, male, education)

'I completed my degrees there, was employed there.' (60, male, psychology)

'They knew me through my doing my masters prelim in linguistics. Linguistics was part of the anthropology dept and I thought I had a better chance of getting a scholarship from a dept where I was known.' (35 female maths)

'I had graduated from the undergraduate education program in 1980 - in one of the most alternative of their very alternative programs, so I expected that I would have the freedom that I wanted to work on what I wanted (which was pretty much true. I did a lot of independent studies for course work.' (44, female, education)

'Chance; I applied for the Master's at the same place I received my BA, since the tuition was far less than out-of-state, and I thought it was the best university in the state for graduate study.' (49, male, educational psychology)

'Happenstance, I was working in the department and felt OK.' (54, male, psychology)

'Financial Assistance: Graduate Fellowship then Grad Teaching Assistantship.' (34, female, genetics)

'Finance. The scholarship was tied to the University of Hawaii.' (47, female, bilingual education)

Difficulties Being Accepted into a Doctoral Program

Perhaps because the sample were all successful doctoral candidates, most people - 70% - said they had not experienced problems in being accepted into their doctoral program.

There were however, nine people who had problems associated with their qualifications being accepted, and four people who faced the problem of limited places in their chosen program. Six said they had no background in the actual field of their studies, while other difficulties mentioned were the lack of a suitable supervisor, administrative difficulties, discrimination, and several people who had to do the GRE again or try and find letters of recommendation after many years away from study.

Problems With Qualifications:

'I hadn't planned to go to graduate school, so I didn't know what I should have done during college to prepare and be a more attractive candidate. Also, experimental psych was (really still is but more so then) a male dominated field. I was rejected by one school where I interviewed because I had no experience with carpentry or electrical work! In short because I was not a cub scout!!' (42, female, psychology)

'I went to an uncredited undergraduate school. I overcame the difficulties that created by entering an MA program at one institution and transferring on to the institution I wanted to attend. At the second institution I was placed on a

probationary-type status. After a semester of that, I was accepted into their MA program and later into their PhD program.' (34, male, psychology)

'Yes, because physiotherapy has a different status in England - it is generally not accepted as academic. This was overcome by showing them how the courses in Australia differ from those in England. I also produced my teaching material and I sat an oral but informal exam.' (35, female, neurophysiology)

'I was almost not accepted into the graduate school I applied to because of discrimination against the school where I obtained my Master's (a small multicultural alternative school). Luck, I suppose. The admissions committee sent me down to a guy who was hungry for grad students because he was so unpopular (and for good reason!). After a year, I found my way to a good adviser, and things went better. I'm still pretty angry about the process, especially because other students - minority students - from my school are having a hard time getting into the educational program (and this program has been known for its non-traditional emphasis!).' (44, female, education)

'There was some 'suspicion' in that my undergraduate degree and master's were not in education. The first university I applied to told me that I would have to get a 'proper education degree' (and teacher certification) before they would admit me. I didn't go there. I was also a 'foreign student' and required a student visa - all it took was more time to get it.' (59, female, education)

Limited Background in the Study Area:

'I did not have the background in my chosen area. I took four courses in summer school and did well in them. This helped me gain acceptance to the program.' (48, female, educational psychology)

'I was initially discouraged by the program chair because of my limited experience in the field - to overcome this, I just worked hard and proved him wrong.' (32, female, psychology)

Other Difficulties:

'I initially applied to Clinical Psychology graduate programs - to 2 programs - and was not accepted. Cited were statistics like 500 applications and 5 places.' (48, female, psychology)

'The only difficulty I faced concerning my acceptance into a doctoral program was that I had to take the GRE again. Too much time had elapsed since I had taken the GRE for my Master's program.' (47, female, ethnic education)

'Had to write a qualifying paper and could not do it 'academically' enough after many years of focussing on staff development ways of thinking! It was knocked back and re-written under the 'time gun'.' (50, female, education)

'I was turned down for financial aid at UC Berkeley. I called my adviser, told him I was afraid the next letter would be a denial of admission, he called to intervene on my behalf and I was accepted.' (50, male, economics)

'After being away from academia for several years, one problem I faced was getting letters of recommendations. I didn't have copies of the ones I received from my undergraduate days, and wasn't sure if the professors

would really remember me well enough to write new ones.' (35, male, psychology)

'Anyone new in the Southern States is an outsider! I yelled at the graduate director because he hadn't been upfront with me about how much the fees were and he wasn't going to give me the full tuition waiver that he'd promised - it took me 2.5 years to recover from that!' (31, male, education)

'The principal difficulty I had was my relative ignorance of the requirements and particular process needed for admission.' (36, male, bilingual education)

'I joined the program as a masters student, fully intending to do a PhD, but not confident enough to present myself as wanting to do one. I upgraded after 2 years. I was required by the department to present to a departmental committee some writing on my research before I was allowed to upgrade. I got the upgrade.' (48, female, social science)

'Actually the only hindrance that I had was a professor at my undergraduate college who refused to write me a letter of recommendation for my application to graduate school. He had a PhD in chemistry and was my favourite professor. I had excelled in his classes and he previously recommended me for the top science award given by my college. When I asked for his letter, he refused saying that it was a big mistake for me to pursue the PhD and that I should get an MD instead. Needless to say, I was shocked and disappointed and felt that he didn't believe that I could do it. He explained that he thought I had great potential and that a PhD program would strip me of my self-esteem and motivation. In the end, I got letters of recommendation from other faculty members.' (28, female, genetics)

'It took about two years to identify the appropriate supervisor and institutional structure to accommodate the doctoral proposal.' (43, male, art)

No Difficulties Experienced in Gaining Entry:

'No difficulties. My local university seemed to take everyone at that point, although I understand they no longer do.' (45, female, Literacy)

'No difficulty. All my prior education credentials were well above threshold requirements.' (53, female, astronomy)

'No. Probably because I already had a good publication record, I was offered scholarships by each university that I applied to.' (45, male, geology)

'Nope. Had a strong MA in a teachable subject area , as well as excellent writing skills and an interesting background. In fact, I was also admitted as a Junior Fellow, into a special graduate college of the University.' (50, female, education)

'No problems, had a first class Honours degree and was prepared to wave it in people's faces (young and brash, I fear).' (56, male, marine ecology)

The Need to Complete a Qualifying Program

Forty per cent of those surveyed were required to complete some form of qualifying before being granted entry to their doctoral program Of these, 55% were required to take an entry examination, while 50% were required to take formal courses. Five

people were required to complete a detailed proposal. Several people had to complete a combination of exams, courses and submission of a proposal.

The general feeling from those who undertook some form of qualifying program was that it was a reasonable expectation that improved their chances of doctoral completion, although once again the fact that the sample were all successful in their studies may influence this view.

Exams, Entry Courses and Research Proposals to Gain Entry:

> 'Coursework involved certain required courses. Qualification for the program was via comprehensive exam after two years. It was a reasonable requirement.' (63, male, education)
>
> 'The first year of study was followed by 'A' [Admission to Candidacy] exams. Cornell's program was unusual in not requiring any courses and in tailoring the A exams to each individual student. I had three faculty members on my graduate committee and each one gave me his/her own essay-type questions to answer for the qualifying exam. After all members of the committee had read all answers, we had a joint meeting, discussed my progress and I was admitted to candidacy. I thought this method was well-suited for graduate studies where each student is pursuing a degree shaped by specific interests. I would have liked to have somewhat more structured guidance in the form of at least one course or seminar that all first-year students took in common. In later years, that system was implemented at Cornell.' (48, female, psychology)
>
> 'One year. There were four exams before admission to doctoral candidacy, one each in Research Design, Statistics, and Measurement, plus a overall examination in Education (history, psychology, law, etc.).' (44, male, psychology)
>
> 'Yes. We had to take MAP prior to acceptance.' (51, male, social work)
>
> 'Doctoral Qualifying exams. Written: 3 days, 8 hours per day. Oral: 2 hours with faculty committee of five.' (52, male, educational psychology)
>
> 'Yes. after a year of coursework, there were qualifying exams for the PhD. These consisted of 5x3hr+ papers covering all English literature plus an oral exam. Passed exams 6 months after coursework.' (52, male, literature)
>
> 'It took me a full year to get through the qualifying program. I think it was good for me to have to do this. It was harrowing, but it gave me time to decide a few things about the institution and the degree program as well. I viewed it as the institution's chance to qualify as much as mine.' (38, male, medical)
>
> 'All doctoral students were required to take a preliminary examination within one semester of entry and to pass it. It was not very rigorous and was not a serious hindrance to anyone that I was aware of.' (49, male, educational psychology)
>
> 'The qualifying exam for my doctorate was a timed thesis (essentially). We had two and half months to write a seventy five page paper with a literature review, gaps in the literature and research design. It was reviewed by a faculty committee.' (28, female, ethnic education)

'We had to take certain courses the first two years and complete an integrated literature review and a research proposal. It was a good program.' (48, female, educational psychology)

'At the end of the second year and in order to be admitted into candidacy, PhD students must prepare a proposal for research leading up to a dissertation. At this time it is required that we defend our proposals in front of a committee made up of three faculty members.' (36, male, bilingual education)

'After a two-year course of study and laboratory research, we took a 'qualifying exam'.' (28, female, genetics)

'Preliminary coursework took 2.5 years, taking an overload of classes through two school years and three summers.' (50, female, ethnic education)

'Yes, coursework in cognitive, social and biological psychology plus experimental methods.' (33, female, psychology)

'Qualifying program was in terms of completion of taught courses - broad based program which enabled you to maintain high level of knowledge in several areas. Enjoyed that aspect as there is always time to narrow your field but not always in the reverse.' (41, female, physical education)

'I was required to take a one month English course to improve my understanding of the language.' (56, male, chemistry)

While those who had been required to complete varying kinds of qualifying programs were positive about the benefits derived from these, one person had strong counter views:

No, and after completing 3 degrees I would not have commenced a PhD at any university that included preliminary course work as part of the PhD program. Now, in my role as an Assoc/Prof I argue strongly against any proposals to include coursework in PhD programs. I believe that a PhD is a research degree and that if a student can't rectify any deficiencies in their basic knowledge without the need for formal coursework, then they should not be enrolling in a PhD program. (45, male, geology)

Nature of the Degree and Course

The nature of the degree undertaken was more a function of geographic location and tradition than anything else. Those completing their doctorates in the United States and Canada undertook the accepted pattern in those countries of number of courses plus a dissertation, while those who undertook their degree in Australia and England, for example, took the accepted pattern in those countries of a research dissertation only. Thus, around 30% of those surveyed completed the latter, while 70% completed courses and a dissertation as part of their doctoral program.

Most comments made in response to this question concerned the nature and utility of courses completed as part of the candidates' doctoral programs, i.e., the 'North American' model.

'Two years of coursework and one year of dissertation work, the latter in a research assistantship set up but not funded by the Institute.' (63, male, education)

'Three years of course work (including teaching assistantships for two years and a research assistantship for one year). One year of fieldwork gathering data. Dissertation work for 2 years. Half of my doctoral program was course work (I had no master's degree when I entered the program).' (48, female, psychology)

'We took SO many courses. We took 125 quarter hours of course work. It was way too much. That took three years including some summers. For the dissertation we registered for 45 quarter hours, which is a year's worth of credits. Even if it took over a year, we used only the one set of credits. The whole program was absurdly long. And the length was added to the fact that we worked on quarters, not semesters, so we took incredible numbers of courses.' (45, female, literacy)

'Sixty-six hours of coursework was required, but most take more. I completed 81 hours of coursework and spent about 9 months (of my 2 years and 9 months) on my dissertation. I tried to tie all of my assignments to the area in which I would later conduct my study.' (44, female, medical)

'I was the first to fully utilise a new program in which it was possible to choose most courses, beyond a basic core, from across departments and disciplines. I also did a number of independent studies on topics which drew from various disciplines (mostly anthropology and speech communications, as well as educational psychology and other areas in the school of education. Since I was simultaneously a teaching assistant, and working at a preschool AND a lingerie store (owned by same person: her motto: We take care of the days, and nights!), I usually took the minimum number of credits (12) per term. This is one reason it took me 4 years to complete the coursework and take my exams.' (41, female, literacy)

'70% coursework and another 50% dissertation (I mean that seriously).' (52, male, psychology)

Choosing and Gaining Approval for the Area for Study

Choosing the Area for Study

The most popular aid to or reason for selecting a particular area for doctoral study was advice by a supervisor or someone suggested by the supervisor (27% of those surveyed). For some, their current occupation or career provided the subject matter for their doctoral study (22%), while personal interest was the main factor for others (22%). Following on from a previous area of study was the major reason given for choosing a particular subject for study for 20% of those surveyed. Others mentioned the specialisation of the particular faculty or department where they were enrolled as being the major reason for their selection of topic (6%).

Reasons for Selecting the Topic for Investigation:

'My first choice was abandoned because I was not able to put together a dissertation committee which would 'frame' the study the way I wished to frame it. I chose to select another topic rather than be at odds with a committee. The second topic was one I judged to be worthwhile and of sufficient interest to me to keep my interest throughout the process of completion.' (48, female, education)

'I selected my own topic which brought together my work as a social psychologist and my interests in feminism and poststructuralism.' (40, female, psychology)

'I worked on one topic suggested by my adviser for 2 years. It didn't pan out. I had done research in the area of dropping out before and tried to incorporate my interest in causal modelling with it.' (39, male, education)

'Topic selected on basis on strong interest in the area, and previous initial exploration of literature in Masters program.' (46, female, education)

'From the very beginning I was interested in student motivation and self-regulation processes.' (55, female, computer based instruction)

'I chose issues related to race because it seemed like a popular topic that I cared about, and psychosocial development because it interested me.' (34, male, education)

'Chosen in conjunction with other research happening in my department.' (35, male, neuro science)

'I wanted to work in space research. The University of Geneva had only one program in space research, on ultraviolet astronomy by stratospheric balloon. I took what was available, having followed my then husband to the city.' (53, female, astronomy)

'It grew out of a practical problem I encountered in my part-time job while taking the first semester's course.' (50, female, science)

'The topic represented issues and questions that I had been concerned with in professional and philosophical contexts for some years.' (43, male, art)

'I had anticipated doing a study involving multimedia, but I saw a demonstration at our school on problem-based learning and knew immediately that I wanted to investigate this method further.' (44, female, medical)

'I was working in the area, and felt our approach was too simplistic - needed to understand more about details.' (30, female, biology)

'This happened serendipitously: I was already working on a research project with my adviser. My dissertation grew out of that naturally.' (30, male, psychology)

'I am a long-distance-runner and I selected a problem I could not solve in my own practice. My Prof. was euphoric when I told her about my research plans.' (32, male, physical education)

'I did my masters in the same area of research (drugs and aggression), which made the transition to a dissertation natural; same adviser, similar apparatus, analyses, framework, etc.' (36, male, chemistry)

'I took a spatial cognition class in the Geography department and loved it, so I built the topic into my dissertation (based on studies in Psych that I'd already done). The only difficulty was combining the literatures of the two fields. The professors in the two departments had already worked together before.' (33, female, psychology)

'I was able to continue my honours project and thus I knew the field of study was of considerable interest to me. There were no problems as I was invited to continue.' (60, male, physics)

'My interest on the topic arose from my experiences as a teacher, current problems in education, and material covered in courses. As a matter of fact, the pilot study for my dissertation was a class project for one of the courses I registered for. The process seemed natural, at least from the point of view of the evolution of the research question, if not in the preparation of the proposal itself.' (36, male, bilingual education)

'I got the idea from talking with faculty members. The specific idea came from the person who became my Research Adviser. No difficulties occurred.' (34, male, economics)

'I selected my topic with the guidance of my supervising professor.' (47, female, ethnic education)

'I worked with ----- on topics that he was investigating during the first year, which was formal modelling of learning, and then switched more into the intelligent tutoring area which he had just started up. It didn't present any difficulties, but it was a bit fortuitous that it was something I was very interested in. I don't think I would have wanted to stay in the formal modelling.' (36, female, psychology)

'I was lucky - a faculty member in sociology approached me and asked if I was interested in working on his research agenda (nonverbal communication). I was and became his research assistant for a year and then did my own work.' (52, female, social science)

'My husband had received a Social Science Research Grant to study in Mexico. Therefore, I chose a topic that could be investigated there. The circumstances shaped my choice, so much so that I don't know how I would have chosen if there had not been 'Mexico' to constrain possibilities.' (48, female, psychology)

'Three months of agonising thinking.' (50, female, ethnic education)

'Reviewed the literature as I did courses, looked for under-served areas of literacy research.' (41, female, literacy)

'From the presentations made by students and researchers about their own projects. I selected the one that gave me more opportunities to learn from different fields related to chemistry.' (56, male, chemistry)

'Huge difficulties. In physics, I never had a clue how one should do this, decided that meant I wasn't cut out for physics, and switched to economics. I made lists and lists of dissertation topic ideas in economics, one of them looked doable, and it was.' (50, male, economics)

'I selected the topic late in the process because I had very little input from faculty. that is, I brought them many topics, but they wouldn't support or reject them, so I ended up choosing late in the process.' (34, male, psychology)

'Drifted into it. Had been going to look at a local population of sea cucumbers, but they'd been wiped out by the previous very hard winter (1962/3), so I took the next best thing that occurred to me. There was, I

regret to say, no attempt on my part to identify what research skills I needed to acquire or how I should structure my learning process.' (56, male, marine ecology)

'I selected my own topic which brought together my work as a social psychologist and my interests in feminism and poststructuralism. It did not present any particular difficulties even though it was the first 'theoretical' doctoral project undertaken in my department.' (40, female, psychology)

'Selecting the field had no direct difficulties other than the absence of supervisors with specialist knowledge in the technical field.' (63, male, management)

'Final choice came through prolonged discussion with another doctoral student and subsequent reading both of which returned me to my sociological undergrad roots. Change in topic required change in supervisor (Dean) who questioned the integrity of my initial program. Subsequent supervisor was forthright in his disinterest in my topic, but accommodating nonetheless, hence a supervisory marriage of convenience.' (43, male, education)

'Did it present difficulties? Oh, God. Is the Pope Catholic? First of all, I get wrapped up in a tedious and boring project that served him more than me. It was OK, I guess -- I sure learned a lot. But, if I had been doing my own research, I would not have chosen this topic. Anyway, he drags me along on this -- with me barely understanding either the topic, or the design. Then, 3 weeks before the defence he decides to have a nervous breakdown and resigns from the university. So, I was left to finish this thing and defend it on my own. Since he was my dissertation chair, I had to reconstitute the committee, appoint a new chair, finish the damn dissertation and defend the thing all in 3 weeks. I defended on the last possible day to meet my target graduation date.' (42, male, education)

'My dissertation grew out of previous work I did. There were some difficulties in getting the project approved because it involved a conceptual leap from where the established literature was at the time.' (48, female educational psychology)

'The topic represented issues and questions that I had been concerned with in professional and philosophical contexts for some years. The only difficulty was the process of crystallising it into a delimited and concrete project proposal - a process that was assisted in the final stage by an enthusiastic supervisor.' (43, male, art)

'Actually started one topic which I had to abort because pilot data showed it would not work with the population.' (54, female, psychology)

'Finding the right topic was extremely difficult. Once the research began, it generated its own questions.' (60, male, psychology)

'The major difficulty was coming up with a topic that both my dissertation adviser and I were interested in.' (53, female, history)

'I chose my dissertation. The only 'difficulty' was my own personal struggle with finding a topic I thought was significant and manageable. Most people probably have a similar experience.' (35, male, psychology)

'Yes this was a very difficult stage which took a long time, the more I read, discussed the more issues arose the harder it was to focus. The broad area

was clear but not the specific research question. This took about 18 months to refine, and was particularly difficult as was not opting to do a conventional straightforward study.' (42, female, literacy)

Difficulties in Gaining Approval for the Research Project

Only 12% of those surveyed said they experienced problems in having their dissertation topic approved. These were accounted for by two main problems: methodology clashes with supervisors and a lack of understanding of what was being attempted by the supervisory committee.

Difficulties gaining approval:

'I proposed a qualitative study using a critical-constructivist paradigm. No one in my department does qualitative research or works outside a functionalist paradigm so I had great difficulty.' (28, female, ethnic education)

'If I remember, it was a bit too 'psychological' for an education dept and I had to make sure educational implications were clear.' (54, female, psychology)

'There was some question from my committee about the procedures for collecting the data and the reliability of my measures.' (55, female, computer based instruction)

'The medics around me did not value qualitative research and were not interested in what women had to say about their health. They (the medics) knew the answers.' (47, female, health)

'Unfortunately, two of the four committee didn't really understand it and gave me problems (needing to add explanatory stuff that was unnecessary if they had understood the premise) during the defence.' (45, female, literacy)

'Somewhat, in that my diss. chair and other faculty members on my committee in my own dept. did not understand my statistical methods at all and knew little about the theory / investigation involved. but no real 'roadblocks' were put in front of me because of this.' (32, female, psychology)

'My dissertation grew out of previous work I did. There were some difficulties in getting the project approved because it involved a conceptual leap from where the established literature was at the time.' (48, female, educational psychology)

'Not from my committee. But had problems obtaining permission for the research from the Ministry of Education. That was sorted out through personal contacts.' (47, female, bilingual education)

'I wanted to research with First Nations women in Canada because they have specific problems in each province, but my committee required me to conduct research in another country and work in the First Nations research as a secondary theme.' (50, female, education)

'Yes. Dissertation committee not in agreement. Various views on what was an acceptable level of work.' (43, female, psychology)

'No real difficulties except a personality conflict with my supervisor. He did not seem to understand that I knew exactly what I wanted to do (as I arrived with my own funding, I felt that was OK) and tried to divert me into something more akin to his own research.' (28, female, ecology)

Final Comments

While extrinsic reasons for undertaking a doctorate were noted by many of those in the study, intrinsic reasons predominated and tended to be more powerfully expressed. Even when extrinsic reasons such as needing the doctorate to gain a new position or promotion were noted, often this was qualified by the expressed desire to complete the degree for one's own sense of achievement. Wanting to know more about an area or subject the person found fascinating was a common reason cited for undertaking a doctorate.

The most common factor hindering the undertaking of a doctorate was that of financial difficulties and pressures, with the related issue of family responsibilities and issues also being problematic for many. Cultural difficulties were more likely to be mentioned by women, including entering 'male dominated' domains, discrimination and family opposition.

The major reasons for choosing a particular university at which to complete a doctorate were geographic proximity and family reasons, with the two frequently being related, e.g., needing to attend the nearest suitable university because of family ties and commitments. The reputation of the university and the perceived quality of its doctoral program and the desire to work with a particular supervisor were also common reasons for choosing a particular university. The other major influence was financial inducements and assistance provided by the university of department.

The majority of those surveyed had not experienced any problems being admitted to their particular program. For those who did experience difficulties, having their qualifications accepted and lacking sufficient background in the desired area for study were most common.

Around 40% of those surveyed were required to complete some form of qualifying process before being admitted to their doctoral program. Entry examinations and qualifying programs were the two most common forms this qualifying took. For some, this was extremely time consuming, adding years to the process. However, overall, those undertaking such programs saw the benefits, particularly when courses were undertaken.

Once entry to a doctoral program was achieved, the selection of a particular area of focus for study was the next major undertaking, regardless of whether the doctorate was the 'North American' or 'British' model. The most common aids to selecting an area for investigation were the assistance of a supervisor, the current occupation, and personal interest. For the small number of candidates who experienced difficulties in gaining approval for their research topic, the most common reasons were methodology clashes with supervisors and problems with the supervisory committee.

Chapter Four now considers the experiences resulting from the process of completion of the doctorate for those surveyed.

CHAPTER FOUR

COMPLETING THE DOCTORATE

Introduction

This chapter examines how the successful doctoral candidates supported themselves, and in many cases their families, during the undertaking of their doctoral programs. Problems associated with 'surviving' the doctorate are also explored.

Facilities needed and provided and the perceived adequacy of these from the students' viewpoints are also considered.

Attention then turns to the key question of supervision, with the issues of the nature and efficacy of the supervision provided to candidates examined and both formal and informal aspects of the relationship explored.

Financial Support During the Doctorate

In answer to the question of how they supported themselves financially during completion of their doctorate, 37 of the 139 people surveyed said they relied on full-time employment. There were an additional 32 who supported themselves through part-time work and some form of award or grant, 23 who utilised student loans and 19 who relied on awards only. Only four people relied on both an award and their family for support, while 22 had some combination of awards, work and family support during their doctoral program.

Keeping in mind the fact that this was a successful cohort, 33 people (24%) felt that supporting themselves had been overly difficult. Financial hardship was the major problem for 21 of these and there were six others who commented about having to make sacrifices in their life and a further six who experienced difficulties associated with balancing work and study.

What follows are some typical comments from those surveyed concerning how they supported themselves during their doctoral programs.

Full-time Work Only

> 'I was supported through my income from full time employment. It involved considerable sacrifice for me personally and my family. Estimated total cost $15,000'. (48, female, education)
>
> 'I survived mainly through my own employment. My employers were extremely supportive, allowing me to use their resources - including paid time off as required. My wife worked fulltime too, which helped financially. The actual research was not expensive'. (37, male, psychology)
>
> 'I was the only full time employed person in the family. I taught a regular load in high school. to support my studies and taught night school twice a week'. (56, male, education)
>
> 'I worked full time for the university as an administrator during my doctoral program. There were no financial hardships. Besides, they paid 75% of it'. (42, male, education)

Part time Work and/or Some Form of Award

'The first year I worked, the second year I worked as a part of a scholarship I received but only made enough to survive by working 25 hours a week. In my third year I received a national Spencer Fellowship.' (28, female, ethnic education)

'I supported myself through scholarships and part-time employment. This was very difficult for me since my family not only could not help with my support but I needed to help support them.' (48, female, educational psychology)

'I received a full tuition scholarship and a stipend for a teaching assistantship, so financial problems were minimal'. (28, female, genetics)

Part-time Work and Support by Family

'I worked 20 hours a week as part of my graduate assistantship; had a student loan; and also relied on my husband's salary'. (50, female, ethnic education)

'I had part-time employment as a teaching assistant in my department for the first three years, then support from my family (grandfather) plus a guaranteed student loan for the last two years. The problem is that I'll be paying back the loans for a long time'. (33, female, psychology)

'For first two years I relied on my spouse and savings; for the next year I had a teaching job and three other jobs with the faculty and a state agency; and in the 4th and 5th years I worked as a research assistant'. (40, female, education)

Awards only

'I supported myself with international fellowships and awards each year. Their amount was more than enough to complete my research program'. (53, female, astronomy)

Other Means of Support

'I relied on the sale of possessions in Australia, remortgaging the family home, limited income of spouse, limited casual work, limited government benefits in Britain due to having a British spouse, gifts from family and friends, scholarship in the second year of my overseas residence which reduced the overseas fees to 'home' level fees, and blind faith'. (43, male, art)

'Initially I received a fellowship. My wife worked. When our son was born, I started working full-time'. (39, male, education)

'I worked at clerkships developed through the clinical programs, I also got my own job (when the clerkships ran out) as a part-time psych assistant and part-time teaching position at the university. In addition, in 1987-88 and 1988-89, I received a government-subsidised loan. Parental support was sporadic but helpful'. (36, male, chemistry)

'In my first year at Berkeley, I relied on parent support. For the remainder of Berkeley, research assistantships. At Wisconsin: Fellowship and wife's part-time income'. (50, male, economics)

'I held The Monash Travelling Scholarship for three years. My wife took some part-time work in Oxford for those three years. For the two part-time years that followed the three full-time years I was employed full-time as a high school teacher back in Australia'. (50, male, literature)

Financial Hardship

As noted, 33 people – almost a quarter of those surveyed - experienced problems caused by having to support themselves. Poverty was the major problem (21) and there were six comments each about sacrifices and trouble balancing work and study.

'My kids and I lived on a scholarship supplemented by casual teaching and research assistance and a welfare benefit. My welfare benefit supplement enabled my income to 'rise' to the established government measure of the poverty line at that time. This means that I was living 'at' the poverty line while completing my doctorate - which was an improvement on the years of my undergraduate work. A second scholarship covered my fees'. (40, female, psychology)

'I was poor most of the time and had to borrow money (student loans) to eat. Now I have a lot of debt that is going to be difficult to repay'. (30, female, psychology)

'It was a very difficult period financially, and for this reason I had to complete in three years as I had no other means of support. The weekend work meant that I had reduced time to work on the thesis'. (35, female, neuro physiology)

'The need to work 20-30 hours a week along with a full course load made our home life almost non-existent. My wife eventually dropped out of the program because of the sacrifices she was forced to make in her personal life'. (34, male, economics)

'There were a lot of problems with my family and no holidays during those eight years experience'. (50, male, education)

'Having to work slowed down the process. However, I was tired of working on the dissertation anyway. It really presented a much needed break'. (35, male, education)

'I think that this workload inevitably slowed my thesis completion, but who can support a family on a scholarship?'. (35, female, history)

Provision of Facilities by Departments and Universities

When asked about what facilities were made available to them to support them in their studies, there were 32 (23%) who said there were none provided or that those provided were unsatisfactory. About half (60) had an office, usually shared, 45 had computers provided, 23 an allowance, 17 had some form of infrastructure support, 11 had special library facilities and 19 had all the above. Some typical comments follow.

None or Unsatisfactory Facilities

'NO assistance of any kind was provided with the exception of consultation from faculty members on my dissertation committee (for which I paid tuition each semester)'. (48, female ,education)

'As a grad assistant I had office space in a cramped, dirty, ugly office with two computers and two phones for 12-15 people. We were expected to provide paper for and print our dissertations unless we cheated and sneaked things in. The longer I was there, the worse it all got. I understand that things have deteriorated completely now and no grad students have access to the supply closet'. (45, female, literacy)

'The university supplied nothing except library space'. (52, male, literature)

'You're kidding! The faculty member who provided most support (who was in other dept) provided some equipment; I also offered training opportunities to masters level students who assisted with my data collection'. (32, female, psychology)

Office Space and Other Facilities Provided

'Office space was available throughout the formal program'. (36, male, chemistry)

'Laboratory space, computer access, and technical support were provided by the university and were quite adequate for my needs'. (28, female, genetics)

'I had shared office space with another grad student at the beginning, and my own office as I was further along. We had a phone, too. There were typewriters available for student use, and filing cabinets. I think office space was a function of teaching there, too. We had to see students, and some privacy was necessary'. (50, female, education)

'Sufficient computing time, desk available in computer lab area for working, personal computer and printer available in lab area for dissertation writing. All were adequate for my needs'. (50, female, science)

'The major support was through the use of computers and that I could do over 50% from my home- the RA and other graduate work - library searches, etc.'. (51, male, social work)

'Assistants had shared office and college computer facilities. Seemed adequate at time'. (41, female, physical education)

'I received partial support for travel to one professional meeting a year if we presented something at the meeting. Yes, this was all very adequate'. (33, female, psychology)

'The item I most needed was library help, which I got when I visited Canada each year. I saw my thesis committee at the same time. Once I got home to Australia, my library needs were partially met, although OISE has still got the most extensive literature on the many and varied aspects of

Third World education that I have encountered so far'. (50, female, education)

'I did not use any of the university facilities other than the library'. (52, female, social science)

'I had office space and travel grants for two conferences I gave papers at. One travel grant was funded by the university, one by the department. I got all my stationery and computer disks and most of my computer paper from the department. I also applied for and got money to cover cassette tapes and batteries used for interviews and most of my petrol money. The facilities were pretty good'. (48, female, social science)

'We had a very helpful department secretary, computer labs, e-mail access. I found this adequate. I was able to do library searches from home, communicate with fellow students and teachers by e-mail, do statistical analysis etc.'. (55, female, computer based instruction)

'I was given an office and had, as all other students, access to free computing. Also, the university had writing and statistical consultants for anyone who needed assistance'. (36, male, bilingual education)

Fitting In to the Department and Faculty

The majority - 95 or 68% of those surveyed - believed that they had fitted in well to the department and or faculty where their doctorate was undertaken.

There were 12 people who felt lost or disengaged or who felt that there were elements of the 'fitting in' process which were both positive and negative, while there were 14 who felt they were not accepted, commonly because of a clash of methodology and secondly, for 'political reasons'. Two people admitted they had problems because of their lack of effective interpersonal skills.

'Fitting in' to the Department and Faculty

'I fitted in OK - it took a while for everyone to get used to 'The Australian girl', but the people I worked with then are among my very best friends now. I was supported very well by peers and less well by the academics who seemed to think that someone from the antipodes was a bit of a joke'. (28, female, ecology)

'I'm fairly outgoing and so I impressed myself upon people. I became involved in organising annual department social functions between faculty and grads (at home of a faculty member) and dragged people off occasionally for a beer, and so got to be known'. (43, male, education)

'Relationships with faculty were fairly close and we interacted frequently on social terms'. (48, female, psychology)

'The faculty don't go out of their way to be nurturing and supportive emotionally, but they certainly were intellectually supportive and gave us excellent support in doing research. I was quite stressed during my first year, but mostly because they expect you to be able to work with very little close supervision - I met with my adviser about twice a week and he expected real progress every time. You can't be tender or easily get your feelings hurt, but I consider it a real privilege to have worked with such exceptional people'. (36, female, psychology)

'It depended on the individual faculty member. Overall, I'd say the faculty was supportive. I always got the sense that they wanted me to: 1) succeed; 2) finish the program; and 3) have competence'. (42, male, education)

'Mixed' Feelings

'I've got mixed feelings here. I can't say that my Doctoral adviser did much for me. My Research adviser was more helpful, but hasn't been any real help or particularly friendly, for that matter, since I finished at Pittsburgh'. (44, male, psychology)

'The one less positive point I'd like to mention is that many (if not most) of us who were returning to Academe after several years of having enjoyed a professional life felt that faculty, to some extent, treated us 'older' scholars the same as if we were undergraduates. It seemed as though our prior professional lives meant little (if anything) to them--it was hardly ever discussed'. (50, female, education)

'I fitted into the institution as well as the rest of the students, but the faculty were not especially eager to be accepting or supportive'. (34, male, psychology)

'I did not fit in well socially, not having experience with afternoon teas and so forth. I was a dynamite inner city teacher, very smart, got a lot of attention, and that attracted jealously from those with less ability but higher social standing. I got great support from some, sabotage from others. What else is new?'. (50, female, art education)

Disenchantment, 'Politics' and Other Problems

'I fitted in well, although in order to get funding in the second and third year I had to change departments. This meant that I didn't have the same feel for the second department as I had for the first which remained my 'home' though without me really being in it. The whole experience from year two on was particularly solitary as far as the actual PhD work was concerned. I felt like I was ploughing my own furrow, with support from my supervisor but without a real feel for an intellectual home'. (42, female, literacy)

'I virtually worked alone for the entire three years. while my supervisors were supportive my project did not 'fit' anywhere in the department and the complication of working off campus meant that I had very little contact with anyone other than my supervisors'. (40, female, psychology)

'They indicated that I had rubbed several senior faculty members the wrong way by raising serious methodological concerns about their entire research programs in my comprehensive exams. I was told that I had grounds to challenge the ruling, but that it would be a living hell if I decided to stay'. (34, male, economics)

'I did not fit in well with the department's goals of research, research, research. My interests revolved around application; I got into my field for the goal of 'helping to make the world a better place'. Our faculty actively discouraged students from pursuing any other interests except research in a narrowly defined area of the field, research that would directly benefit the faculty member's vitae'. (30, male, psychology)

'I became disgusted by much of the politics that occurred during my training. Sometimes, I was forced to take sides with my mentor against other department faculty. There was a real split between the PhD and MD faculty. In this medical school setting, the MD's got treated better (pay, benefits) and were often promoted more rapidly than the PhD researchers even though the PhD researchers published the same amount or more. My mentor was an MD and a tenured faculty member who held grudges. I had a pretty lonely existence for the last several years'. (28, female, medical)

'Doctoral students were generally held hostage to the internecine fighting, petty jealousies and outright wars between faculty, and between departments'. (41, female, literacy)

Supervision and Supervisors

Supervision Arrangements

The most common form of doctoral supervision experienced was that of a chief supervisor and committee, which was the mechanism for 48 of those surveyed. A committee panel alone was the supervisory pattern for 30 people, while 29 had a major supervisor only. The next most common arrangement was that of a major and minor supervisor, which was experienced by 11 people. Five people had co-supervisors. The remainder experienced some other arrangement such as a research team who provided advice.

While the form of supervisory arrangement was 'not negotiable', 84 (60%) of those surveyed said that they had the opportunity to provide some input to the membership of their panel.

Thirteen of those surveyed said their supervisory arrangements were not too their liking, eight were ambivalent, while the remainder approved of the *type* of supervision they experienced (the matter of *quality* of supervision is taken up separately below). Some relevant comments follow.

'There was a three person committee. I had some say over two of the members. It was useful in some ways, mostly in learning about the structure of the project, the format of the written work. It was not terribly useful in terms of guidance'. (46, male, education)

'The standard committee was five persons, at least one of whom had to be outside the school of education (mine was the Dean of Health, P.E. and Recreation Physiology, - or some such title). The chair was our program adviser. I selected from those qualified by interest in the deanship the most women I could just to balance my training (almost exclusively men). My adviser gave me political tips and tried to put together a friendly, but sufficiently critical group to assure my work would get a careful review and be maximally credible. He also claimed his purpose was to be sure I didn't get talked into doing any of their pet projects as my own (since this didn't turn out to be a problem, I don't know whether it was his influence or the fact I went to them with such a complete proposal - and plane tickets for the next week - that they didn't dare intrude!'. (54, female, education)

'My doctoral adviser made suggestions as to who would be good on my committee and he suggested that another faculty member be co-chair with him on the dissertation. This arrangement worked out very well because

they each had something different to offer, and they liked each other so I was not caught between two warring faculty advisers. The other co-chair of my dissertation was a woman, one of the few on the faculty at the time'. (59, female, psychology)

'I choose my chief supervisor, and had a secondary supervisor which we both choose who was not involved after the first year'. (35, female, maths)

'I had a chief supervisor and second supervisor. Chief supervisor was dictated by the grant, second was my choice. Yes, it was to my liking'. (35, female, psycholinguistics)

'My supervisor was an obvious choice. I had no say in the associate supervisor but was very fortunate in that she too turned out to be excellent, supportive and approachable'. (40, male, medicine)

'Initially an adviser was assigned to me. As you decided on a dissertation topic, you could choose someone in your field of expertise. Your Chairperson then becomes through formal agreements with the Graduate College the supervisor'. (51, male, social work)

'I had a supervisor of my choice. At Wisconsin, this was a person who never failed to express enthusiasm for any progress, which I needed'. (50, male, economics)

'I had a chair and up to three other faculty on my committee. I chose all members. There was no 'outside' committee member. This seemed fine to me. The only issue ever was talking a faculty person into serving on your committee or changing committee membership. All of that however was negotiated without any problems. (48, female, psychology)

'We were totally free to choose our major adviser and the other members of the 5-6 person committee. It was great'. (48, female, educational psychology)

'I was one of two junior researchers in a team of about six people. My official supervisor was the Head of Department. He was not a member of the team. I rarely discussed matters with my official supervisor. I learned informally from my colleagues on the team'. (53, female, astronomy)

'I had two co-supervisors (one from the university and the other from the Geological Survey)'. (45, male, geology)

'I had joint and equal supervision from two people within my department. We met both separately and as a group- at times when I was working full-steam, we would meet as necessary, usually once a fortnight to discuss drafts'. (35, female, history)

'I had joint supervision with two supervisors in two separate institutions. I chose this arrangement. At the time it seemed like a good idea, although during the course of my research there were a few problems'. (34, male psychology)

'I liked this method, but I may have been lucky. Several people I knew felt stuck. It is a good idea to be able to choose a chair after you have been around for some time and know people. I would have preferred to have

my temporary adviser, but since she was leaving, I suppose I was lucky to have her as an unofficial member'.(45, female, literacy)

'I did not have any say in this arrangement and don't think I ever considered whether I liked it or not - it just 'was'! In hindsight, I think the advisory group is a wonderful idea, and recently suggested that we should adopt it in the department where I now work'. (28, female, ecology)

'For coursework we had an adviser, for the dissertation we had a committee, we had no choice. The arrangement of the committee went pretty well. Faculty advisers were worthless because they didn't take their role seriously'. (28, female, ethnic education)

'My adviser was mostly involved. The committee was introduced in the end. It allowed me to get through the dissertation. However, it was not ideal. Needed support from others besides my adviser. But he didn't really involve anyone else and I felt like I couldn't really go ask them on my own'. (39, male, education)

'I had very little choice in the composition of my committee. I was free to choose my supervisor, however. As for the others on the committee, most were members by virtue of belonging to the department faculty. I didn't like this arrangement since the faculty in the department did not get along well with each other'. (34, male, psychology)

'The arrangement for the comps committee was not to my liking, because I did not want my adviser to be a member of either committee, because my interests changed when I got into the program and he was not really relevant. Plus, I didn't particularly like him personally. But, I was stuck with him'. (42, male, education)

Quality of Supervision Received

There were 83 people – 60% - who expressed overall satisfaction with the quality of supervision they received in their doctoral program, while there were 25 who expressed mixed satisfaction/dissatisfaction to varying degrees. The remaining 21 people surveyed expressed dissatisfaction with the quality of doctoral supervision they experienced. The following comments cover the spectrum of those made about the issue of quality of supervision.

'My supervisors provided just the right amount of assistance and advice that I required, and we had no problems that could not be resolved amicably over a few beers'. (45, male, geology)

'My supervisors stretched me with provocative and stimulating conversation and gave me unsolicited guidance and advice when they deemed it in my best interests'. (47, male, education)

'They were real people and I saw them as very personable individuals who I still keep in contact with'. (43, male, education)

'I had no problems. Lorrie and the others were accessible when I needed them. If they believed I should be able to work the answers out myself, they always provided me with enough info so that I could do that'. (52, female, medical)

'The member of the committee who had introduced me to the major instrument I used did the close, day-to-day tedious editing, both for the sense of the prose and for the sense of the statistical treatment of the data. Together, they were a great help to me, although I never saw them at the same time outside my two committee meetings (proposal approval and defence)'. (59, male, educational psychology)

'For my program, I received good info and support because my chair knew all the ropes and how to get things done to standard'. (45, female, literacy)

'My supervisors discussed my project with me, took care of administrative arrangements (like enrolment, progress reports and examination) read my work and commented on my writing. They were both only tangentially familiar with the field and their assistance was limited by a lack of familiarity with some of the basic material I worked with. The advantage of this arrangement was the intellectual freedom it afforded me with the obvious disadvantage of high risk'. (40, female, psychology)

'When approached or asked directly, my supervisors provided adequate to good attention. In retrospect, it seems to me that supervisors were content to let students go their own way - very laissez-faire - and so the quality of supervision received depended very much on how demanding one was as a student. Being new to the game of being a graduate student, I was not very demanding'. (48, female, psychology)

'I should have spent more time on the phone with him, if only to relieve my concern that I was on the right track'. (34, male, economics)

'My biggest problem was that my adviser was promoted first to department chair, and then to dean. Not wanting to look like he favoured his own student, I sometimes got less help from him than did other students'. (35, female, psychology)

'My chair provided minimal - no assistance. I had tremendous (and sole) support from one committee member (in another dept)'. (32, female, psychology)

'Faculty support during my dissertation was poor at best. Being at a large research university the faculty have no time or interest to work with students (even at the doctoral level). This is a chronic problem!'. (28, female, ethnic education)

'My supervisor read what I sent him, usually saw me when I requested a consultation, provided minimal commentary and less than minimal encouragement. I was very much left to my own devices. I was too naive to know what to do about it beyond asking for more consultation time and more feedback than my supervisor was prepared to give'. (50 male, literature)

'I had not much help from my official supervisor and much help from my colleagues, most of whom where not much older than I was'. (53, female, astronomy)

'Initially, my Chairperson was very difficult and required that I 'conceptualise' my dissertation in different ways a number of times. I

initially had the feeling that there 'was no light at the end of the tunnel''. (51, male, social work)

'My supervisor never found time to read my work until weeks after we had met to discuss it, she never looked at my analysis in any detail. It was not until I had finished the thesis and wanted to submit it that she started looking at it seriously and decided that she didn't like it. The next six months were absolute hell, only saved by my co-supervisor who managed to persuade No 1 supervisor that this was a good thesis and should be submitted'. (47, female, health)

Contract Arrangements With Supervisor(s)

The most common form of contact arrangement with doctoral supervisors was informal contact, a mechanism experienced by 56 of those surveyed. There were 42 people who arranged meetings on a 'need to' basis, while 16 candidates experienced an arrangement comprising formal set meetings. The remaining 25 doctoral students experienced no or intermittent contact with their official supervisor.

Informal Arrangements

'A typical exchange would be 'Hey, Shawn, can we talk?', 'Sure, come in''. (46, male, educational psychology)

'We had no formal meeting times arranged for supervision but I would talk about my work at least once a week with one or both of my supervisors (commonly over lunch) and both were available whenever I wanted to discuss anything related to my work or to any other topic. Basically it was up to me to initiate meetings as and when I needed to discuss things'. (45, male, geology)

'There were many informal chats over lunch and in the company of other students. My supervisor was approachable and available when needed'. (43, female, education)

'There was no formal arrangement for regular meetings but the supervisor was always prepared to meet when asked and we saw each other regularly as I worked day to day in the department'. (52, male, literature)

Meetings

'Meetings were arranged as needed. The faculty supervisor was a full-time professor'. (36, male, chemistry)

'I met with my co-chairs on campus, and at their homes, as needed. These were adequate because they were timely, and extremely useful'. (59, female, psychology)

'Fairly formal arrangements - meetings when needed'. (41, female, physical education)

'The other supervisor was considerably more formal in approach, with contact and discussion confined to formal meetings, although friendly ones all the same'. (35, female, history)

'He had a lot of students (about 10), so we had a formal meeting time every week. We also had a weekly research group meeting which all his students attended'. (36, female, psychology)

Little Contact or None

'The only meetings occurred when I went back to Canada. My supervisor writes letters but doesn't answer email or faxes. I felt lonely!'. (50, female, education)

There weren't any arrangements and, in retrospect, they were certainly NOT adequate for my needs.(56 male marine ecology)

'No arrangements were made because the faculty do not want to commit any time. I would try to set up meetings intermittently but couldn't even get her attention in these meetings'. (28, female, ethnic education)

'I saw my adviser once or twice a semester with the most recent writing I had done. Perhaps I should have seen him more often, but this schedule was as much the result of my work and family life as of anything else'. (53, female, history)

'We had occasional social gatherings (once per term?). Yes they were adequate. (34, male, education)

'There was little or no structure. We were more likely to meet for dinner socially than to set up academic meetings. There was a sort of strain between being social friends and intellectual dependents. It was not addressed directly - avoided, rather. I still am envious of reports of others who lunched every day with professors and fellow-students who were all engaged in a joint research effort. Any intellectual companionship I had was largely self-generated or initiated. At the time, that seemed fine. In retrospect, I feel somewhat cheated'. (48, female, psychology)

Relationship with Supervisor

The majority of those surveyed - 111 people (80%) - said they were satisfied with their relationship with their supervisor. They went on to say they became friends (36), developed mutual respect (15), shared professionalism (21), were friendly but professional (15), and that the relationship was challenging and intellectual (3). Of those who found the relationship unsatisfactory, 10 said their supervisor had other priorities and four said there were gender issues and clashes.

There were 39 people who said their relationship with their supervisor improved over the course of their studies, while 12 said the relationship had got worse.

A Positive Relationship Overall

'Overall relationship with the supervisor was positive - as Head of Department, he was keen to see the first doctoral candidate graduate'. (63, male, management)

'The relationship was first class and fully supportive before, during and after the course of study'. (59, male, management)

'My supervisors (and their families) have become close friends (despite considerable age and status differences)'. (37, male, psychology)

'Overall, it was good. Over time the major change was from student to colleague'. (48 female, educational psychology)

'The relationship was excellent. As mutual respect and trust grew over time the relationship became more open and relaxed. My supervisor was always supportive and loyal, was a critical friend (never undermining confidence), provided excellent and fast critical feedback on writing and was a wise and diplomatic mentor and friend. A lasting friendship has resulted from the experience'.(43, female, education)

'We knew each other over a 7-year period. We fought. We hugged. We went out to lunch and dinner. We were like sisters. Sometimes we played off of each other at social events. We were both strong-willed, and not all of her advice during my doctorate was in my best interest. But on the greater whole, I had an excellent supervisor who made me believe that my work was important and worth the agony that I went through to complete it'. (48, female, social science)

'It began very positive and remained positive. I respected their expertise and they related to me in a very positive, supportive manner. It is very important to choose committee members who do not have a need to build themselves up by making doctoral students look stupid; get well adjusted, happy people on your committee!!!'. (48, female, education)

'The relationship was one of mutual respect. I began in awe of her and then came to see her as a colleague with whom I could bounce my new and rapidly developing ideas'. (31, male, education)

'The overall relationship was very good and progressed well at a professional level'. (39, female, psycholinguistics)

'Our relationship was positive, professional, and collegial'. (47, male, education)

'We had a very friendly relationship, although it was very much a 'staff'/'student' relationship, as was expected and accepted at that time'. (60, male, physics)

A Degree of Dissatisfaction and Other Problems

'During the process of the dissertation, he was exacting, demanding, etc., etc., etc.. Part of this problem was the sense of ownership that we feel for our dissertations - especially since we design the instrument, gather data, designed the protocols, designed the study, and developed the idea. I did learn to write well - or at least better during this process'. (51, male, social work)

'My supervisor was not much real help. I was left alone mostly. He did not have the knowledge. My first submission failed because he did not have the statistical understanding of the examiners. He died - perhaps fortunately - and I completed my thesis while on leave from uni'. (54, male, psychology)

'It is my opinion that my official supervisor had problems relating to professional women. He was not a highly regarded researcher, but a shrewd operator and entrepreneur. He was very at ease among men of the same culture, but somewhat ill at ease outside this environment. Our

relationship kept worsening as I approached completion, with him delaying completion with endless requests for additional work. I suppose it was his way to prove to himself that he had power over me'. (53, female, astronomy)

'My supervisor (actually not a professor) was very harmful: he was a gay male and the only other supervisee was a gay male (I'm a straight female). The supervisor consistently discriminated between the two of us, treating the other supervisee quite well and even telling me that he disliked me strongly. I should have asked to be assigned to another supervisor earlier on that semester, but didn't realise I'd have any recourse'. (35, female, psychology)

Changes in the Student/Supervisor Relationship

'Our relationship started in a very formal way - teacher and student. I was quite intimidated by him in the beginning but learned to stick to my opinions even if they disagreed with his. Over the course of my doctorate, we got to know each other quite well and I feel that he came to respect me as a scientist'. (28, female, genetics)

'I had a good relationship with my adviser that became closer during the course of the doctorate'. (62, male, education)

'Over the entire course of my program, my relationship with my supervisor went from a very structured, professional professor-student relationship to boss- employee to colleagues. Some of it was a natural progression of going through the program, but some changes were due to situations. For example, we worked together as consultants for a school district evaluation project'. (35, male, psychology)

'We became better friends, and the friendship has continued. At first he was the Herr Professor, but during the course of study he became 'Paul''. (47, male, psychology)

'Weird! Of course the relationship changed. I went to R------- feeling quite lost and scared, a long way from home and with a big task in front of me. My supervisor was very intimidating and seemed to have different ideas about my PhD than I had. It took me some time to work up enough courage to challenge him about that - when I did he realised I was not as meek and mild as I first appeared to be, and I think he was relieved! We got along much better after that; but I was quite distrustful of him. He is quite a rude person, and I do not really like him personally (to be honest), but I respect him professionally, and was therefore able to work with him. Once toward the tail end of the PhD (as is so in most cases, I assume) I knew more about my side of things than he did and this is when we started getting along much better, working as colleagues'. (28, female, ecology)

'It was okay at the beginning but as she began to feel the pressures for tenure, I hardly ever spoke or talked to her and could not get feedback on my work. Tenure is a harmful process for students. What it means for students is seven years of neglect from faculty'. (28, female, ethnic education)

'The only slight change was that I had to take more personal responsibility for defending my topics as time went'. (33, female, psychology)

> 'I lost respect for the supervisor over the course of the work. I ended up being less proud of my work as it turned into something that more closely resembled the supervisor's work. Standards were unclear. There was a lack of direction or 'teaching' during the process. I came to be more aware of the supervisor's limitations'. (43, female, psychology)

In Chapter Five we consider in more detail how the doctoral experience affected those involved.

CHAPTER FIVE

COMPLETING THE DOCTORATE: FORMAL AND INFORMAL ASPECTS OF THE PROCESS

Introduction

This chapter explores both the formal and informal aspects of the actual completion of the doctorate. Adjustments and changes caused by this undertaking to the personal lives of those surveyed are explored, including methods used to cope with the pressures of the doctorate. Positive as well as negative aspects of the process of completing a doctorate are also examined from the experiences of those who took part in the study.

Attention then turns to the more formal aspects of the doctoral process, with an examination of the mandatory aspects of doctoral programs such as presentations, seminars and colloquia. Candidates' assessment of the usefulness of such activities are then explored. This is followed by an outline of examination and defence process undertaken by those surveyed, any difficulties experienced and how these were overcome.

We then explore how the individuals felt physically and mentally at the time they completed their doctorate, and how they might have changed since that time.

Finally, the issue of dissemination of research findings is explored.

Adjustments and Changes to Personal Life

Only 13 respondents (9%) said they had not experienced changes to their personal life while completing their doctorate. The most common changes experienced by the remainder revolved around family and personal life (60% of changes reported), changes to life outside the family (14%), financial changes (14%) and work changes (9% of reported changes).

In answer to the question of whether they had experienced any pressures, difficulties or crises during their doctoral studies, 76 people responded, with the following areas of concern being cited: relationships (26 cases), financial (15), lifestyle (12), health (10), academic (7), supervisors (4), and other (2).

In terms of coping with these pressures and problems, the methods most commonly used included: 'I worked through it' (16), reprioritised (12), worked hard (11), and got formal help (7). There were 15 who said other things, mainly that their spouse or family helped or that the supervisor and faculty were understanding and helpful.

Some of the positive aspects of completing a doctoral program were nominated as: making friends (5), being exposed to new perspectives (3), academic rewards (10), enjoyed the 'academic' life (7) and 'learning about myself' (11 of those surveyed). What follows are a selection of comments about the issue of personal adjustments and effects arising from the completion of a doctorate.

<u>Personal Adjustments and Changes</u>

> 'I chose to get up at 4:00 AM to do studying to have quiet time and to be available to family in evenings; gave up TV almost entirely; worked library time around schedules of others. Entire process required 'juggling' to maintain roles of school administrator, wife, mother, student. I managed with less sleep and a sense of humour. The faculty was not

involved in assisting with these pressures; it was not an issue for them'. (48, female, education)

'I didn't read a newspaper or watch TV for two years. This was the biggest problem.. I also lost a sense of my identity. I am still trying to regain it'. (28, female, ethnic education)

'It was hard for me to overcome dependency on authority, and become an independent thinker. I found it very frightening to be out there on my own. I had always been the bright and gifted child, a bit sheltered, and had trouble confronting the real world with my ideas. I think, looking back, my supervisor(s) were wisely attempting to make me independent of them. However, this was very hard for me to accept. I sometimes held back for fear of confrontation'. (50, female, art education)

'I seldom went out, spent little money, almost ceased any social activism work. I can't think of anything positive from the experience except I developed a friendship with another postgrad and we had lots of enjoyable times and my supervisor is still a friend and mentor'. (48, female, social science)

'My friends suffered most from my lack of time to see them. I didn't have much time for my husband either in the early years of our marriage, but he could understand this better than my friends and family did because he could see how busy I was. My family was not supportive of my work, and we were always on the brink of bankruptcy. I just did the best I could, persisted, and didn't expect help with my problems from anyone'. (42, female, psychology)

'The only difficulty I faced was with my wife who was 'home sick' most of the time. This problems didn't affect my work and my friends helped us to survive. The University had a program for foreigners that helped us to overcome my wife's adjustment problems'. (56, male, chemistry)

'I had been married only a couple of years, first child was six months at commencement and had a second before completion. My wife stopped work to care for kids. Had no income. there were the usual adjustments related to family life. My wife had to put up with a helluva lot - but for me it was about the most exhilarating time of my life'. (60, male, psychology)

'Had to constantly juggle my schedule to manage work, children and school. Finding day care when I needed it was a constant crisis. We overcame this by hiring a live-in housekeeper. The ability to do two or three things at once was a positive outcome'. (37, female, educational psychology)

'I became more efficient. I spent much more time at the computer and much less time with friends and family. I spent less time walking, or in the garden'. (46, male, education)

'It took up an enormous amount of time and so I felt pressured to be always working. Restricted entertainment - mainly self-imposed in retrospect'. (42, male, chemistry)

'I suspended my personal life. No vacations, no social life, and nothing extraneous like church attendance. Worked fairly well, although it is hard to get out of that mode'. (39, male, psychology)

'I walked away from an almost ideal teaching job in mathematics in one of the very top ranked undergraduate mathematics programs in the US in order to do this doctorate - because I wanted MORE from life than just teaching'. (40, female, education)

'Time pressures of job bearing down upon available time to research, think, write, etc. I worked harder using nights and weekends to achieve results. (35, male, neuroscience)

Financial Adjustments and Problems

'Adjustments to a new culture and to a different (lower) standard of living were major considerations'. (43, male, art)

'The major problems were financial -the whole family had to adjust to a lower standard of living. I was not prepared for how much the PhD would dominate my life for such a long time'. (38, male, medical)

'It was a little tight in the finance aspect'. (32, female, physical education)

'We lived on nothing, but my husband was unfailingly supportive - I think he was maybe a little surprised and intrigued to watch me in graduate school - he hadn't really seen me in action as a scholar before - we lived on nothing, had no money at all - maintained a mortgage and private health insurance throughout but had nothing else'. (40, female, education)

'When I left the university I had to arrange computing facilities in my new town. This represented a major expense for my family at the time. The main adjustment was required during the write-up stage. This took eight months'. (37, male, psychology)

'My family was not supportive of my work, and we were always on the brink of bankruptcy'. (42, female, psychology)

Pressure on Relationships

'My PhD intruded on my personal life in many ways. Two major crises occurred. First, I started a relationship soon after I started my PhD. I deferred my PhD because of this relationship and the relationship finished about two years after starting. I found out I was pregnant just after the relationship finished. I miscarried. The PhD was not the problem, he was. Second, my father died in the final stages of my PhD after being in hospital in Brisbane for six months. I was his only support. My PhD took longer because of these things but my supervisor was supportive'. (40, female, social welfare)

'Family and friends were supportive of a relatively non-communicative and self-centred person'. (43, female, education)

'I am grateful for the advise my adviser gave me concerning the Counselling Centre at my university. My being in graduate school was very stressful for me, for my husband and for our marriage. We had to adjust to a new way of being a couple. We also had to deal with our emerging differences concerning theoretical issues in education. We found

ourselves on opposite sides of the 'paradigm wars' between quantitative and qualitative research. We are still working through these issues, and learning about ourselves and each other'. (47, female, ethnic education)

'In the writing-up phase of my project I found it difficult to maintain social relationships outside my family. This precipitated something of a crisis in a number of my friendships which I attempted to overcome by talking through the problem with the people involved. This was not a particularly successful strategy since those who were not involved in the academy at all had little frame of reference for understanding the 'write-up' experience'. (40, female, psychology)

'I had marital difficulties. My wife and I almost divorced. Sought counselling, but did not feel that I had much support or understanding from those around me. Felt extremely alone'. (39, male, education)

'My family life suffered, I bitterly regret missing my children grow up, my wife had an affair with a bloke she worked with and left me four days after I was told I had to rewrite it'. (43, male, education)

Health Problems Associated With the Doctorate

'My major physical crisis was that I needed my gall bladder removed in an emergency procedure shortly after I defended my dissertation. I couldn't finish the corrections on time and had to graduate several months later because of it'. (45, female, literacy)

'Actually, I had far more epiphanies and several nervous breakdowns during my second and fourth years of graduate study. These arose from several factors - being in a new political climate, being far away from my family and close, trusted friends, and not publishing massive quantities of research as I was expected to, along with my fellow students not sharing my goals and values'. (30, male, psychology)

'I got sick a lot - pneumonia, chicken pox, etc - I got pretty run down'. (32, female, psychology)

Lifestyle and Other Effects

'I had no life beyond school and reading. This is problematic because it distorts your academic thinking, you become incredibly myopic'. (28, female, ethnic education)

'The total immersion in school, eliciting understanding and support from family and friends, trying to have a life while going through this was very challenging. As it was I managed to see two sons graduate from college, got married, bought a house, and maintained a full time job. It was the busiest time in my life - and a time I felt financially strapped all the time - but I don't look back on it negatively'. (55, female, computer based instruction)

'My partner had a serious car accident during this time and it meant I was under a lot of stress. The university was very supportive'. (35, female, maths)

'The major crisis was after I had completed my research for an economics PhD, and had not yet written a first draft. By then, I knew the results weren't that great, and I was employed fulltime. So I dawdled for five years, never making any constructive use of my evening and weekend hours allocated to the dissertation. Finally, my wife told me to finish it or throw it away. I decided to get it done regardless of what I thought about the quality of the results, took three months off work to write a first draft, rewarded myself with an hour of piano whenever I wrote a page or two, and finally got through it'. (50, male, economics)

'During the first year in a particularly difficult course in electrical engineering, I had the common concern that I would fail, be removed from the doctoral program, and not know what to do. After I passed the course with a B, I never had that concern again. My program overall went remarkably smoothly, and I did not have any serious problems'. (49, male, educational psychology)

Coping with the Pressures of the Doctorate

'I felt insecure academically. I did not waste a minute. Every waking hour was spent in study and in writing papers'. (63, male, education)

'My wife decided to stay home with our kids and allow me to work a ridiculous number of hours each week on my project and my local job'. (34, male, economics)

'I tend to rise to challenges, so we made the arrangements, moved back to Toronto to stay with my parents, and I wrote 265 pages in six weeks, and finished the beast!'. (50, female, education)

'While completing the doctorate, periodic clashes with supervisors or poor evaluations were met with entering psychotherapy for brief periods to address misunderstandings or to redevelop goals. Each therapy period was subsidised by the school or internship program'. (36, male, chemistry)

'Regular psychotherapy helped me to cope with issues surrounding my committee. At first, I was ashamed to go to it because of the stigma surrounding mental health counselling, but I soon came to recognise that it is a strength to recognise that the doctoral process is a lonely one and that psychotherapy and counselling are just another kind of resource that can be used to help a doctoral candidate perform well, finish on time, and have a happier life to boot'. (30, male, psychology)

'Difficulties arose in terms of mental blocks throughout the process. Luckily, I had the flexibility to progress on schedule despite this. Also, the supervisor recognised this and if too long a time elapsed between my producing material he would seek me out and assist in whatever way he could'. (39, female, psycholinguistics)

'I needed to priorities the dissertation; at different times it became more important and my family was able to be supportive and accepting of my decisions at these various times'. (51, male, social work)

'Most of my problems had to do with a certain faculty member and his treatment of graduate students. The faculty tried to intervene, but the

'good ole' boys' club won out. Eventually, this faculty member and I had no contact at all and everything was fine'. (30, female, psychology)

'I met the man who later became my husband while I was in my analysis and writing stage, but he was very understanding about putting our relationship 'on hold' until my program was completed'. (52, female social science)

Positive Aspects of the Doctoral Process

'I can't think of anything positive from the experience except I developed a friendship with another postgrad and we had lots of enjoyable times and my supervisor is still a friend and mentor'. (48, female, social science)

'Basically, I didn't have a lot of personal life. I actually went to parties more then than I have since, because the graduate students were quite a close group and did a lot together'. (36, female, psychology)

'Positive aspects were that I learned I was a survivor, understood more about how people in the power structure had their own needs/pressures and - I got the damned degree. It's all mine'. (56, female, marine biology)

'I think the opportunities associated with this PhD program (research assistant, teaching assistant, outside jobs related to the content of the program, etc.), helped me to gain a perspective on how one applied this knowledge'. (52, female, medical)

'Positive aspects. the discipline that you have to have or acquire to do a major piece of research, the interest in the thesis as it evolves from speculation to finished form'. (52, male, literature)

'Career-wise, its positive aspects included being selected for my current job, where prior to completion, regardless of my considerable teaching experience, I simply would not have got past the first round of selection - so a sense of being 'legitimate' within the institution - and finally, the spin-off of being in a job where I can finally rely on institutional support and apply for grants ,etc., for my work - it's a different world in some ways'. (35, female, history)

'The most positive aspect of the process was the opportunity to do what I had wanted to do, namely teach on the college level'. (34, male, psychology)

'The overall positive aspect of the process is that I am qualified to do original primary research in a professional capacity - and to attempt to publish results'. (35, male, psychology)

'I relished the opportunity to be a full-time student and enjoy the process of learning, of being self-directed, engrossed in a topic of interest, and not be distracted by other jobs to do. I loved it!'. (46, female, education)

'The positive aspects were that for the most part I thoroughly enjoyed what I was doing and the interaction with fellow students and staff was very stimulating. I was able to conduct part of the study at Pitman's College in London, thereby meeting very different and interesting people. (39, female, psycholinguistics)

'My wife had to put up with a helluva lot - but for me it was about the most exhilarating time of my life'. (60, male, psychology)

'Positive aspects: Teaches one self-sufficiency, the need to network with others, to work smart, and to not give up hope'. (50, female, education)

'Positive aspects are hard to find! I suppose becoming confident in a new area and at the moment the fact that I finished!'. (56, female, physics)

'I hated the process but it made me a seasoned, self-assured person in the end'. (28, female, medical)

Formal Requirements

Forty seven of those surveyed maintained that there were no mandatory aspects of their doctoral program apart from coursework, where applicable. Of those who nominated mandatory requirements, the most common were: departmental presentations (47 people); presenting reports (20); presenting a course of lectures (10); attending conferences (5); presenting a proposal (4); publishing a paper (4). Some candidates had more than one mandatory requirement.

There were 11 people who believed that the mandatory requirements they undertook were not helpful to the completion of their doctorate. However, there were 44 people who believed that the mandatory activities they undertook were in fact helpful. The most common reasons given by these included: improving the individual's skills (16 people); keeping the person 'on track' (11); and assisting the person develop professionally (13).

Relevant comments about formal non-coursework requirements of the various doctoral programs included:

<u>No Mandatory Requirements</u>

'One of the issues I loved was that I did NOT have to take any courses. As and example, I learnt radioactivity from Irene Curie and Frederic Joliot -Curie, whose lab was next door, because I wanted and it was interesting. Nobody told me I had to. Nothing, other than producing original ideas, was ever mandated'. (64, male, radiochemistry)

'There was little other than course work formally required. I was 'encouraged' (strongly) to attend colloquia, presentations on campus, conventions. Probably about once a week'. (41, female, psychology)

'Nothing regular or mandatory during the program, but lots going on - one could pick and choose. The only mandatory things were the proposal defence and the final oral'. (42, male, education)

'We were strongly encouraged to make presentations at professional conferences and to submit papers for publications, however these were not compulsory. I think those of us who did greatly benefited from the experience; it certainly made for a strong vitae when applying for jobs'. (46, female, literacy)

'There were no mandatory requirements, although given the research orientation of the institution, we were expected to attend most important conferences. I sensed considerable peer pressure to be a presenter and not only a member of the audience at these conferences'. (36, male, bilingual education)

'I was just allowed to get on with the work. It suited me fine. I did not have the time to waste playing the academic games that go on'. (43, male, education)

Written Reports

'The only official requirement was a report to the university each year on progress. This had to be completed both by the supervisor and by the student'. (43, female, education)

'I had to present an annual written progress report in order for funding to continue'. (39, female, psycholinguistic)

Presentations

'We have a requirement to present at a national conference. You receive no help with this requirement. Many students end up dropping out because of this'. (28, female, ethnic education)

'We had to present public seminars about our dissertation topics. They forced us to organise and present in a non-jargon way what we were discovering. They also gave us the opportunity to share our knowledge and our current state with your classmates; which was helpful as a way of guiding us to support each other'. (46, male, education)

'There was an unwritten/informal expectation to do one pre field work and one post fieldwork presentation at the weekly departmental seminar, which I did'. (48, female, social science)

'All PhD students were encouraged to present at least one (1hr) seminar to the department each year and most of us found that this was useful'. (45, male, geology)

'We had regular oral presentations. Students presented usually twice in three semesters. These were of dubious value for me, I felt, because there was enormous pressure to 'perform' and to 'not look bad in front of others', so as a result students presentations were very tentative and not revealing of what the research was about, beyond the absolute minimum. Some students never discussed certain projects they did - we either found out about them through informal discussions or, more frequently, through seeing them in print in journals later'. (30, male, psychology

'Every grad student had to give two 'brown bag' lunch talks every year. We also had a Pitt-CMU graduate student mini-conference which the students organised and ran completely themselves which not only let us hear what our colleagues at Pitt were doing, but was a very good experience for public speaking and conference organising. These kinds of experience are invaluable, I think, to a doctoral program'. (36, female, psychology)

Present Lecture Course

'I was required to do very little. All students are encouraged to lecture a course at least once'. (34, male, economics)

'We were required to teach a course (like student teaching). Since this was unpaid, and I had already taught several college courses, the major benefit

to the program was they saved money on an instructor. For some people, it gave them the opportunity to get college teaching experience'. (37, female, educational psychology)

A Proposal

'The only other mandatory requirement of the course was that I had to write a 20 page research proposal and submit it by the sixth month of research. This was a University standard and was extremely useful in identifying clearly the direction and limits of my research. I could not progress in my research until that was successfully presented and accepted'. (43, male, art)

Exams

'Exams were given during the first two years of school. We were also required to take and pass national board exams'. (39, female, medicine)

Helpful Outcomes of Mandatory Requirements

'During dissertation phase, it was necessary to present written evidence of progress each semester. This was helpful as it 'forced' you to keep going'. (48, female, education)

'The benefit was improved ability to speak in front of a peer group'. (40, female, social welfare)

'These were good experiences and did much to prepare me for professional
responsibilities and opportunities'. (48, female, educational psychology)

'The conference gave us something to put on our vitae, and chairing a committee also gave me something else to put on my vitae'. (45, female, literacy)

'Once a year conference attendance at the National Convention (AAHPERD) and once also at AERA because it was close. They were valuable in making contacts and networking ready to apply for a job'. (31, male, education)

'I do not recall frequency, but there were numerous Science, Society and Technology research seminars which I attended, and which contributed to my becoming acculturated to basic scientific research in a university setting'. (58, male, biology)

Not Helpful or Lack of Formal Requirements

'Didn't have much outside the class. I wish I had more of it. Needed more mentoring'. (39, male, education)

'No other mandatory aspects. This lack of institutionalised opportunities for discussion on a department-wide basis did not serve the graduate students well. At the time it was nice to have so few requirements. Now I wish there had been more regular opportunities for discussion and expectations for presenting one's ideas'. (48 female psychology)

The Processes of Defence/Examination

There were 72 people surveyed who were required to undertake an oral 'defence' of their doctoral work, six who made a presentation and defence, two completed a written defence, while 22 sat examinations. The remaining 27 had a doctoral thesis examined prior to meeting the requirements of their program.

There were 28 people who experienced some form of problem with their particular defence/examination system, including: problems with examination panels (16 people); the time it took, which was considered excessive (4); and other problems such as the lack of an exam, stress, 'fighting' the faculty, secrecy, too subjective, and the sheer amount of writing required for written examination.

There were 17 people who mentioned benefits arising from being required to give an oral defence, including the fact that: communication with the panel good (8), having to prepare a defence helpful (5) and that there was satisfaction from preparing well (4).

Comments concerning examination and defence processes included:

Defence

> 'After a written examination I defended the answers orally. One professor had told me much earlier that what they were really looking for was conviction and the ability to stick to and support what I said. Unfortunately, I made the mistake of disagreeing with most of my committee on a theoretical point, and while they couldn't say I was wrong, they really tried to talk me into changing my mind. I didn't change (and I still believe the point) but it would have been easier if I hadn't disagreed. The maximum allowable time by University regulations was two hours, and they grilled me for the full time'. (45, female, literacy)

> 'The oral defence consisted of an hour-long public presentation of my work (seminar) and a two-hour long private defence with my supervisory committee. Following the oral defence, my committee passed me but required some changes in my written thesis. These were quite specifically outlined and mostly consisted of a committee member's own preferences about conclusions that I had made. I felt that this final requirement of rewriting was not necessary and felt that the committee members were injecting their own conclusions into my work. However, I completed this requirement'. (28, female, genetics)

> 'The final defence was an 'open' defence, i.e., the whole university was notified and anyone could attend and ask questions. But it was still less stressful than the comprehensive exams'. (49, female, bilingual education)

> 'The oral examination was held at the end of my third year in Oxford. It lasted for over two hours. It was the most animated, interesting exchange of views and opinions I had had for the whole of the three years. I found it challenging and pleasurable'. (50, male, literature)

Written Defence/Examination

> 'After I completed the required course work, I took a Comprehensive Exam. Each committee member gave me a question. I worked on my responses for several months. After I submitted these responses, I had to sit for an oral defence'. (47, female, ethnic education)

'The exam/defence was always conducted by the professors one chose to be on one's committee. They usually tailored their questions according to their areas of specialisation and the questions were essay-type, open-book. No difficulties to speak of. One had to be able to write convincingly and to demonstrate knowledge of methods, theories, etc., in that writing'. (48, female, psychology)

'After my course work I did written exams. I wrote one eight hour question that combined research and a topic and two four hour ones. I knew the basic questions in advance, and I had had a fair amount of input deciding which would be the long one. This process was extremely fair, if you discount the inherent lack of sanity in these exams'. (45, female, literacy)

'Our written exams were a language exam and an exam on general psych which were timed. We also had two questions to answer at length at home'. (42, female, psychology)

'Our program requires two exams, a preliminary written exam (master's comprehensive/doctoral prelim/qualifying) and a major area exam which is both written and oral. These exams are the most brutal'. (30, female, psychology)

Examination of a Thesis

'I had three examiners, two external and one internal. Process took six months in total, four to mark and then another couple of months for minor corrections. No real problems'. (40, female, social welfare)

'I had three outside examiners. It was very difficult to find suitable examiners for the type of thesis I wrote'. (48, female, social science)

'Examination was by two external examiners. No difficulties - thesis was passed with no changes required. It should be noted that at my university, supervisors must consult with students about choice of examiners. My supervisor put forward a few names; we discussed them. Ultimately I trusted my supervisor's suggestions. Careful choice of appropriate examiners appears to be a critical although errors have still been known to occur'. (43, female, education)

'A written dissertation was sent to an external examiner and my second supervisor was the second examiner (internal)'. (39, female, psycholinguistics)

'The thesis, when finally complete, was sent out to a single external examiner (the supervisor also examined it)'. (56, male, marine ecology)

Problems Experienced

'Copies of thesis sent to two examiners, one overseas who responded within about two months. The other examiner took a long time - more than six months - through illness and being away mainly - but he had to be prodded to get on with the job'. (43, female, education)

'The biggest problem I had was with the graduation office and trying to get clearance from them. Simply put - I spent a lot of time running around campus during those final weeks and I didn't like it at all!'. (55, female, computer based instruction)

'Interpersonal difficulties between two of the committee members. The Chairperson was in control of the defence, and brought it back to the specific purpose of the meeting'. (51, male, social work)

'My defence(s) were both pretty nicely handled. I had some potential doctoral students come to my dissertation defence, which unfortunately had the effect of stifling criticism of my work. I felt disappointed that my committee members couldn't see their way clear to be honest'. (44, female, education)

'The one challenge was that one of my committee members was from outside the U.S. so we had a conference call, which meant that at times there were problems with communication (couldn't be heard, didn't know who was speaking, etc.). Any overheads that were used for the presentation were faxed ahead of time to this committee member. I also had an individual available if it was necessary to fax material to her during the meeting'. (50, female, education)

'It was very difficult to find suitable examiners for the type of thesis I wrote'. (48, female, social science)

'Scheduling a defence time was the major difficulty with faculty'. (44, female medical)

'Stress was the greatest problem'. (47, female, bilingual education)

'The examination process involved a review of the thesis only - all three examiners were external to the University since there was no specialist examiner available internally at the University. One external Australian and two overseas examiners were appointed - as a candidate I was not informed of the examiners and only informally knew who they were after the examination process had been completed and I was given access to Examiner's Reports. The whole examination process was shrouded with 'secrecy'. This seemed to me to be unreasonable'. (63, male, management)

'Comprehensive exams were arduous, lasted two days. I would have preferred a world processor since I am left handed and have poor handwriting. I also have become very dependent on spell check and so forth'. (50, female, art education)

No Real Problems and Actual Benefits

'There were no problems at either the prospectus defence nor at the final dissertation defence. This was due in large measure to ongoing communication with all five committee members, giving them adequate time and information to review written material knowledgeably, and avoiding last-minute surprises'. (48, female, education)

'While writing the dissertation, I was trying to please a committee, so ended up taking them short sections instead of entire chapters. The final defence was on a morning after I had worked the night shift. I fell asleep and woke after the start of the meeting. I called; they would wait. When I

got there, they assumed correctly what had happened, and were just sitting around telling jokes. Actual defence went well, since they had already seen every painful page of the dissertation several times'. (51, female, education)

'Overall, I was satisfied with my responses, and felt that the panel's questions helped me develop my dissertation topic. Their questions and comments were helpful at that defence, and at my dissertation proposal and defence'. (47, female, ethnic education)

'I was well prepared and my committee knew what was coming so it was very smooth. No problems'. (31, male, education)

'The last examination was the dissertation defence. My supervisor/chair promised that she wouldn't send me in unprepared. She didn't and I was ready. Piece of cake. I also knew that I was among friends'. (48, female, social science)

Personal Feelings At Completion

Physical and Mental State on Completion

In answer to the question of how they felt physically and mentally at the time their doctorate was completed/awarded, there were three broad groups of responses (some people made more than one comment about this issue).

In what could be called the positive category there were comments about feeling 'good' (48 people), feeling relieved (18), feeling elated and proud (29) and feeling fulfilled (6).

There was also an ambivalent group with some describing their 'mixed' emotions (36 people), some describing themselves as both tired and happy (19), others feeling excited yet fearful of the future (8), while some felt a feeling of anticlimax (10).

The third group comprised people whose feelings on completion of the doctorate were predominantly negative, including those experiencing a 'bad reaction' to completion, poor health and stress (26) and some who felt depressed, angry and experienced low self-esteem (15 people).

It was apparent from the responses to this question that those who had completed their doctorates more recently were still experiencing fairly intense emotional responses and feelings, and that some were finding the adjustment to 'normality' difficult. Some typical comments follow.

Mainly Positive Feelings

'I did not, nor ever have, felt particularly elated by the accomplishment. At the time I was working against a deadline by which I had to take up a lecturing position in another country so the main feeling was one of relief that it was completed on time'. (52, male, literature)

'It felt a great relief to have finished, and removed oppressive chains'. (35, male, neuro science)

'The day I submitted the dissertation for marking was one of elation and pride. I had never expected to have the self-discipline to complete it, and was extremely proud of myself for having done so'. (37, male, psychology)

'I felt like it was the longest birth on record! Elation that it was finally over'. (48, female, literacy)

'The entire process of researching, writing and defending the doctorate was a fulfilling and invigorating experience. I felt no sense of relief at the time of completion, only a real commitment to continue the research which had given me so much'. (43, male, art)

Mixed Feelings

'I was physically drained for a while but emotionally very satisfied'. (54, female, psychology)

'I was just glad it was over. I haven't had the energy or time in two months to even celebrate. my wife too is so exhausted by it all that we haven't really planned to celebrate - just to try and get some time away from work and from talking about PhD's. I'm totally exhausted by the whole thing. I was excited at first, especially when I came to work and the name on my door had changed, but it wears off quickly. Glad I've done it though'. (40, male, medicine)

'I was exhausted, exhilarated, delighted, depressed, - you name it. I can't identify stages or phases, only that everything was intense and I felt everything. Looking back, I didn't realise how tired and exhausted I was. I think that was the main feeling. Now that my life is back to normal I can see how abnormal I was during that period'. (55, female, computer based instruction)

'Right after I graduated I felt fearful of being on my own. Now students would be turning to me for advice and I was excited but not sure I was up to the task. Now I have learned that I can never answer all of their questions and that's ok'. (48, Female, educational psychology)

'On finishing I felt great relief but still underconfident in terms of my academic and intellectual ability. I felt as if I'd be living an unbalanced life for a long time. It was difficult to adjust to the fact that I didn't have to work/write all the time. I still feel the same on the whole, ie lacking in confidence in my ability to do academic work. Just after I found out I had passed I thought 'I can't be too dumb, I've
got a PhD', but that didn't last long'. (48, female, social science)

'There was quite a space of time between handing the thesis in and its return from the examiners so it was a bit of an anti climax when I eventually heard I passed'. (46, female, education)

'There is definitely a sense of anticlimax. This could be in part due to the whole thing ending with a whimper rather than a bang, i.e., one is never quite sure when it is over. Is it over when the final oral is passed? Is it over when the last revision is turned in? Is it over when one receives the diploma?'. (30, male, psychology)

'I found the actual final defence anti-climatic, but that might be a reflection of my dissertation topic and the level of expertise in this area in my department (topic represented political left theoretically while department faculty are essentially conservative). The weeks leading up to the defence were fairly tense and emotionally draining (self-induced anxiety). Those feelings dissipated with the completion of the dissertation. Of interest to

you may also be the rollercoaster ride of emotions I went through during the entire program. I found, as did some other students, that one experiences periods of self-confidence and the significant worth of one's work juxtaposed with feelings of inadequacy, the questioning of one's ability, and the value of one's research. There was a definite ebb and flow to my emotions relative to my work over the course of the program'. (43, male, education)

Mainly Negative Feelings

'I was recovering from being ill and having surgery when I finished, so I can't separate how bad I felt physically from how I felt emotionally. All I am at this point is angry and disgusted that no one worked very hard getting me a job. They wrote OK references, but they didn't go out of their way to call anyone'. (45, female, literacy)

'I felt physically and emotionally drained on the submission of my thesis'. (43, female, education)

'I have just submitted so can't answer in full. I did feel chronically tired at the time of completing, and then for the next few weeks, incredibly deflated somehow - like post natal depression - nobody tells you about the emotional dead-zone during thesis examination time'. (35, female, history)

'When I started graduate school I lost my self-esteem, confidence, identity, and any sense of happiness. The longer I was in school the worse it got. As a graduate student you are treated as worthless and ignorant. Even as I received national awards acknowledging my competence, I could not shake this sense of inferiority. I had to work hard to re-gain my identity by working out, going to church, reading (unscholarly works) and spending time away from Academe but even after a year of trying to renew myself I am far from complete. The doctorate actually stunted and regressed my growth as a whole person. I am not sure it was worth it to obtain this degree'. (28, female, ethnic education)

'I felt abused by the process and by certain members of my faculty. My feelings have not changed since. The only stage I can identify is that I have come to grips with how angry I am'. (34, male, psychology)

Stages Since Graduation

Those surveyed were also asked whether they could identify any phases or stages they had gone through in the period since completion of their doctorate. Not everyone identified or mentioned such stages, but 20 people said they had thrived since completion and felt better about themselves, while 11 said they went through a phase where they felt unsure of themselves and something of a fraud. There were 13 people who said they now felt worse since completion and were bitter and cynical about their doctoral experiences.

Three people said they went through a phase where they felt that something was missing in their life, while there were eight people who described themselves as being on a long road to recovery following the doctoral experience, with another five saying how they were only now coming to terms with what it all means to them. Four people

said the process of completing a doctorate had made them more aware of their limitations.

> 'It is two years since I submitted but sometimes I don't believe I really have it. People call me Dr ------ and I look like a stunned mullet. Most of last year was taken up with feeling pleased with my self. This year has been more sobering with much of the time taken up with teaching, getting new research of the ground and wondering if it was all worthwhile'. (40, female, social welfare)

> 'I was emotionally drained for the next few weeks and felt that the years of struggle should have been capped by a more visible shift in status. This was probably exacerbated by the Germans' distaste for graduation ceremonies. I was given a hand shake and all of the examiners greeted me with my new title. That was it. It took me six months to actually think of myself as Dr. X. I went and had business cards printed just to see the title in print'. (34, male, economics)

> 'I live in a 'neutral zone' as one developmental psychologist calls it, where you're not quite sure who you are - you're not the person you used to be, and you are not able to be the person you desire to be, but instead you try to exist as the 'real' person you are. My dreams and hope will never die, but my energy level is waning a bit'. (50, female, education)

> 'The entire process of researching, writing and defending the doctorate was a fulfilling and invigorating experience. I felt no sense of relief at the time of completion, only a real commitment to continue the research which had given me so much. I felt the weight of the doctorate marking the beginning of a personal direction rather than the completion of something'. (43, male, art)

> 'At the time I was elated, and proud. I feel good about the program I went through, what I learned and how I performed. my dissertation was in great demand among the female faculty at the time, and it was published shortly
> thereafter. Mine and another woman's were probably the first 'feminist' dissertations done at that school. It was the leading edge of the new field, Psychology of Women. I got a lot of mileage out of that dissertation, thanks in part to the efforts of women members of my dissertation committee'. (59, female, psychology)

> 'Filling this out has made me realise how angry I was (and still am). I was not treated well by anyone, including my family. Toward the end, it seemed like it got easier. Afterwards, I felt like 'What was the big deal?'. Some of it seemed silly in retrospect. But I am proud for having stuck it out'. (39, male, education)

> 'I initially felt fine, optimistic regarding the future. As time has gone by, my view has become more cynical'. (62, male, educational psychology)

> 'The other part of the numbness I think I would describe as emotional. It must be. It makes me cry to write this. There is a sense of unfulfillment. I have used, or perhaps I should say my institutions have used much of what I know and can do for their purposes but nothing has been given back in renewal. That I've had to continually fight for (tiredly but successfully) on my own. But what they haven't wanted is my creativity and vision. I sorely miss being (I've had the experience three times so far)

part of a creative, vision-driven, team. There doesn't seem to be much call for results-oriented developers in education'. (47, male, education)

'Given the lousy employment picture here and the fact that my interdisciplinary degree isn't backed very well with expertise in some more marketable area, I now feel a bit 'duped' that my PhD hasn't really 'paid off' like I thought it would have by now. I'm now seriously considering getting trained or tooled in some other area where I can land a decent job'. (52, female, social science)

'It took me six months to get reacquainted with the concept of having guilt-free fun again. It took me equally as long to feel okay about spending my weeknights and weekends doing fun activities'. (30, male, psychology)

'My recovery from the effects of prolonged social isolation seems to have been long'. (40, female, psychology)

'I heard from another Ph.D. that she was also depressed for a long time after completing her dissertation. It has been almost a year since I finished and I finally have a feeling of accomplishment and completion. I just recently framed my diploma and hung it on the wall of my home, I hadn't been able to look at it for a long time, but it's up'. (28, female, genetics)

'I felt exhausted and as if I hit the brick wall. In retrospect, I feel that this was a process that takes time to sort out. I did learn a tremendous number of things from my Chairperson. Probably the process is that of growing acceptance of the process and understanding what changes took place in me during that time'. (51, male, social work)

'Great feeling of accomplishment when completed. Since then have come to realise how little I know and how much I have to learn from others at all times! (41, female, physical education)

'I felt terrific, having achieved a major goal through remaining focussed and doing a lot of hard work. For about two weeks I also felt terribly clever, but good sense soon reasserted itself, especially as I was in a research job for a nationalised industry and had a better grip on reality by then. Since then I have mostly forgotten about having a PhD, apart from ensuring that it's on my CV when applying for jobs. To be honest, I regard it as being more of an intellectual welding ticket - a trade qualification - than a mark of extreme intellectual performance'. (56, male, marine ecology)

'I have been promoted and I don't think I would have without a PhD'. (46, female, education)

Dissemination of Research Findings

A key issue for the individual, the institution and society generally is the extent to which the knowledge and expertise gained through the doctorate is disseminated. Does the personal and social investment translate into improvement or does the doctorate gather dust on a shelf? As a result, we asked those surveyed for details of how they went about disseminating the findings of their doctoral study and any difficulties they encountered in achieving this.

There were only 60 people (43%) who had disseminated the findings of their doctoral work in some way. A number had used more than one avenue, or had more than publication, for example. The most popular means of dissemination was presentation at a conference (51 people), closely followed by publication in a journal (50). There were nine instances of people writing book chapters, seven people who wrote books drawn from their studies, five who wrote abstracts, two each who published in newsletters and electronically, while three said their means of dissemination was placing their thesis in a library.

However, there were 59 people (42%) who had experienced difficulties in disseminating their research findings. There were 10 who had a paper rejected, 9 who said that they had received no encouragement to do so, seven who experienced methodological problems, while 18 people said they had no time and 19 people said they were reluctant to publish or otherwise disseminate their work.

Overall, there were 32 people (23%) who expressed dissatisfaction with the extent to which they had achieved dissemination of their work.

Means of Dissemination

Journals

> 'I published my dissertation in a refereed professional journal. I'm not sure how much impact it had in terms citations or stimulating other research. I did not pursue that line of research further myself'. (63, male education)
>
> 'I've had one paper published to date. The biggest difficulties I face in dissemination are that my work does not altogether `fit' into accepted publication `categories' - though it has received very positive responses at conference and seminar presentations it is difficult to find a journal for which it is appropriate'. (40, female, psychology)
>
> 'I did publish a part on the validity of one of my instruments fairly quickly. After years of trying and many other publications in the interim a novelist I met offered to take a look. I tried again and succeeded'. (54, female, psychology)
>
> 'I did not disseminate the findings until my supervisor wrote up a paper on some of the joint research we had done (it was not published until 1992). Difficulties were with the review process, i.e., reviewers taking six months to supply us with their reports. I am not satisfied with only producing one publication out of this research but frankly I could not bear looking at it after I had finished it'. (39, female, psycholinguistics)
>
> 'I have published several articles relating to this thesis. The main problem is that I must jointly publish with my supervisor and he slows the process up terribly'. (35, female, neurophysiology)
>
> 'Just when I thought all one needs in life is a Ph.D., I encountered the publications process. I have had one article based on my dissertation accepted for publication; another one is under review right now. My big surprise with this process is how long it takes - although people warned me'. (35, male, psychology)

Conference Presentations

'I have presented some conference papers and will be presenting more I trust. I really do intend to do more with it'. (45, female, literacy)

'My supervisors always really keen about conference paper-giving, so a few chapters have been presented in that form'. (35, female, history)

Book Chapters

'I presented a paper based on my research at a small specialised conference, which published a book later and asked me to contribute a chapter on my work'. (42, female, psychology)

'I tried to pull myself together after being told that it was worthless by one of the examiners. Plucked up the courage when invited to give papers at an important Australian conference organised by the Australian experts. This paper was published in a book without any alterations being asked for'. (43, male, education)

Book

'There was another major benefit of my project. Because of my supervisor's prestige, we were able to secure a very nice book contract before the writing was complete. I was able to publish three quarters of the dissertation in the book and have it come out two months after the defence'. (34, male, economics)

Abstracts

'My dissertation really never went much farther than to my committee and the university library, although a few people seem to have bought it from Dissertation Abstracts. My particular topic was subsumed by new developments in Educational Research which made it, although not obsolete, out of favour. I worked on getting it published for a while, but there was no great interest on the part of publishers and my interest flagged, so nothing came of that'. (44, male, psychology)

Newsletters and Other Means

'Findings were disseminated while the project was in progress (mentoring process of supervisor): conference, journals and professional newsletters etc.'. (43, female, education)

'Interesting question. Since my dissertation was unpublished, I put it on-line on the World Wide Web, and announced it on several e-mail lists I belonged to. Every once and a while, I get comments from people who read it on-line and say, 'Your dissertation really helped me make my life better' and that's incredibly rewarding, far more rewarding to me than having it published in some obscure research journal almost no one ever read'. (30, male, psychology)

'Published on University Microfilms. Satisfied me'. (50, male, education)

'I donated a circulating copy of my thesis to our library and I've noticed it has been checked out a few times since I did that two years ago, which is nice to see. I've thought about trying to do more with it in terms of publishing it, but to be honest if I ever publish, I hope to write something

far more widely relevant and applicable for the general populace to use'. (30, male, psychology)

'There was no dissemination of the findings of my dissertation except binding and placement in the University of Washington library'. (62, male, education)

Difficulties Associated With Dissemination

'I started writing up the dissertation for publication; initial attempt was rejected by a good journal. I'm working with a colleague from the same school/lab to get it accepted by an alternate journal'. (36, male, chemistry)

'I tried to publish. Rejected by one journal. Not pursued. Not proud of the work. My own research interests have since changed'. (43, female, psychology)

'In 1986, I distilled the dissertation into a manuscript that [my supervisor] and I thought ought to go into *JME* based on the types of articles they were publishing at the time. The manuscript was reviewed and rejected; I have never acted on the recommendations of the reviewers, so the manuscript remains unpublished. It is unfortunate that we never did anything about it but, since I went back into the health care setting rather than public education, (where most of my fellow graduates went) it doesn't matter as much'. (52, female, medical)

'I have only made one presentation from my dissertation. I am not satisfied with this level of dissemination. The difficulty I now face is my reluctance to begin writing again'. (47, female, ethnic education)

'I have used my findings in my classes, extensively. I don't particularly like to write, so don't feel a great need to publish, other than for the usual 'publish or perish' reasons'. (41, female, literacy)

'I have not published. I have not found time in my job to write and have not received any encouragement from my supervisors - it would have been nice for that relationship to have carried on as a mentoring relationship'. (47, female, health)

'My dissertation really never went much farther than to my committee and the university library, although a few people seem to have bought it from Dissertation Abstracts. My particular topic was subsumed by new developments in Educational Research which made it, although not obsolete, out of favour. I worked on getting it published for a while, but there was no great interest on the part of publishers and my interest flagged, so nothing came of that'. (44, male, psychology)

'I could have written another [paper], but having been fairly well indoctrinated in the ways of applied research, I have never really got into the way of writing refereed papers. I could have made better efforts to disseminate the findings, but rather felt that it was a dull sort of topic anyway and not really worth writing another paper on. By that time I had shifted my intellectual focus a bit and was more interested in having the next lot of fun than in writing up the last lot'. (56, male, marine ecology)

'Have not published, I get no help from my supervisor and I am pissed off with myself. I do not know what I am going to do to overcome this. I

am still working on it but right now teaching is taking priority. Typical situation'. (40, female, social welfare)

'I'm satisfied, but I should say that all of this was done on my own initiative; my committee members never even suggested to me that my findings were worthy of publication'. (42, female, psychology)

'One difficulty I face is that I am not in a position that allows for time to pursue my own research, so I have to work on rewrites in the evenings and on weekends'. (35, male, psychology)

'I am very disappointed with myself in this area. I had a second child a year after I graduated, and have not published my dissertation in any form'. (35, female, psychology)

'I really didn't try. I was not so happy with the results/topic. It was probably better than I think, but I haven't really looked at it since'. (39, male, education)

'I am not satisfied with only producing one publication out of this research but frankly I could not bear looking at it after I had finished it. I should have published more of the findings. It was disseminated at two conferences and at the Experimental Psychology Conference'. (39, female, psycholinguistics)

'No. I find I don't really like the project. I am not satisfied with the method that my committee finally pushed me into. Have not published it'. (41, female, psychology)

Satisfied with Dissemination

'I've been completely satisfied since this work was still being cited more than twenty years after publication'. (60, male, psychology)

'Overall, I am satisfied with the extent of my dissemination to this point. (35, male, psychology)

Chapter 6 now considers the overall effects of the doctoral experience.

CHAPTER SIX

OVERALL EFFECTS OF THE DOCTORAL EXPERIENCE

Introduction

This chapter examines the overall effects that the completion of a doctorate has had upon those taking part in the study . We have already explored the feelings of those surveyed at the time of completion and how the findings of the doctoral work were disseminated, or not, as the case may be.

We now attempt to put into a broader perspective the impact that the degree has had upon the individuals concerned, their family and friends and their careers.

Finally, we consider what these 'survivors' of the doctoral experience think is required for doctoral success. In Chapter Seven, we summarise what has been gleaned from the study and how this relates to the literature, before ending with what we see as being the essential lessons of the study for improving doctoral programs and maximising the benefits for individuals, institutions and more generally, society.

Effects on Self, Family and Friends

In summing up the effects that the completion of a doctorate had had upon them, 94 people (68%) made what could be classified as positive comments. These included enhancing one's self-concept and self-esteem (52 responses), changing others' view and regard for them (35), improving one's career (20), and the skills and knowledge gained through the process.

There were 11 people who made what could be described as mixed comments, where often some of the above had occurred, but relationships or health, for example, had also suffered.

There were 21 people (15%) who summed up the overall effects of the doctoral process in exclusively negative terms. Such comments included health and physical problems attributable to undertaking and completing the doctorate (5), emotional problems (11), social problems and problems with friends arising from the doctorate (3) and negative effects on family relationships (3 people).

<u>Overall Positive Effects of the Doctoral Experience</u>

Enhanced Self-Concept

> 'Achievement of that major goal made me feel good about myself - particularly after the anxiety and self doubts of the first quarter'. (63, male, education)
>
> 'I feel slightly more assured and self confident although I am conscious of the responsibility for performance that the doctorate brings'. (43, male, art)
>
> 'I've had enormous growth in self confidence, feeling that if I want things to happen in my life I can and why didn't I sort my life out 10 years ago, what took me so long!'. (47, female, health)

How Others Views The Achievement

'My family and friends often seem to be in awe of this accomplishment'. (28, female, genetics)

'My mother is very proud of my achievement'. (47, female, bilingual education)

'My family are proud, most of my childhood friends are shocked and amazed'. (31, male, education)

'My family don't seem to realise what I have achieved but perhaps they are quietly proud of me. Some friends are thrilled for me. One social circle (a sports group) I didn't tell as they would see me as snotty!'. (47, female, health)

Skills and Knowledge Gained

'It told me that I could work at the highest international level in a hard science. It has given me professional confidence ever since. It provided me with a sound background in the hard science which has proven to be of great value in my work in the Social Science ever since'. (53, female, astronomy)

'On the positive side it has given me greater confidence in my ability to problem solve, and the quality of my writing has improved enormously'. (38, male, medical)

A Mixture of Positive and Negative Effects

'If anything, I'm even closer to my husband and sons than before. For some friends I made who were also working on doctorates I have gained respect and admiration, for others I lost respect as I watched them make excuses and take the easy way where possible, some even violated professional ethics in my view'. (46, female, literacy)

'On my own family, no effects. I'm divorced from my wife. Friendships have now improved, I feel well and healthy overall'. (32, male, physical education)

'At times it gives me a sense of pride and a feeling of belonging to an exclusive 'club.' At other times, I feel it is not necessary to what I do, or has any bearing on what I hope to accomplish in my job. Some acquaintances at work do not even know I have a doctorate. Several people have one; others are working on it; some don't care about going back to school -- it's a mixed bag'. (51, female, education)

'My health's improved since the doctorate was completed. How do I feel about myself? No different, really - I've always done work I enjoyed, done it well, and taken pride in my accomplishments - this experience was no different than other life experiences in this regard (albeit a bit more strenuous)'. (32, female, psychology)

Negative Effects

'My health is buggered, all stress related and exhaustion, particularly when a new computer virus wiped out my office and home machines and

the entire thesis had to be typed again by a copy typist. I have hopes that my health will improve though'. (40, male, medical)

'My husband has had ups and downs after graduation. He's sometimes intimidated, feeling overshadowed by my accomplishments (especially since he's still unemployed). I'm not convinced yet that we will weather this storm as a couple'. (44, female, medical)

'My health has suffered as I have not been so active. Consequently I have gained weight and am not as fit as I should and like to be'. (30, female, mathematics)

'I have had several stress-related health problems. I find that I can no longer contemplate going back to Germany to do teaching or research. The very idea gives me cramps in my face and tongue. I can hardly even think of speaking German without some discomfort'. (34, male, economics)

'My mental health had suffered considerably, and as a consequence, so had my wife's state of emotional well-being. By the time I wrapped and posted the completed thesis I had become very well aware of how destructively focused I had become on the task; but I still had a way to go before feeling relaxed enough to have spontaneous fun without feeling guilty about not being at work on some aspect or other of the thesis. Family and friends were quick to say: 'Good. That's over at last. Get on with whatever's next'. But for some time afterwards, I didn't know for sure what would be next. In spite of having good and interesting work to do at the college I felt let down, empty and unfocussed for a while. Periodically, I felt moments of self-disgust at having spent so much time and energy doing something that had so much more personal than professional value'. (50, male, literature)

'Only a couple of the friends I had before my doctorate are still in my life. I was shocked at some of the jealousy and pettiness I encountered from friends. One of my closest friends was going through the doctoral program with me, but when I began moving ahead faster than she did, she began to set up roadblocks to try to hold me back. The competition she felt ruined our friendship when I most needed it. I began to look at my relationships differently. Was this relationship neutral, supportive, or destructive to my completion? If it was destructive, I tried to eliminate the time spent with that person. It seems cold to think about relationships that way, but it gave me more insight about true friendship. The friendships I had before that I have been able to maintain feel unshakeable'. (44, female, medical)

'The most significant impact that graduate school had on my family was the inability of my wife and I to visit them as often as we wished'. (36, male bilingual education)

Career Changes and Influences of the Doctorate

There were 100 people (72% of those surveyed) who believed that their doctorate had made a positive influence on their career. These included 14 people who attributed a promotion and/or pay rise to the completion of their doctorate, 40 people who were able to obtain new employment and 52 people who said that their doctorate gave them more career opportunities than they had prior to doctoral completion.

Three people said they had actually put their career 'on hold' for the moment so that they could attend to raising a family, something which they had put off until their doctorate had been completed.

Ten people noted negative career consequences resulting from the completion of their doctorate, including five who were yet to obtain a job, while there were two people who said that they were now 'too qualified' for the careers they wished to pursue. The remainder of those surveyed either made no comment or believed that their doctorate had made no difference to their career.

Positive Career Effects of The Doctorate

> 'My doctorate qualified me for my current job, which I have held since graduation'. (50, female, science)
>
> 'I wouldn't be where I am today without it - a tenured faculty member at an elite liberal arts college. It took me 18 months to get my job after graduation, but market forces determined that wait'. (42, female, psychology)
>
> 'I definitely could not have gotten the jobs in research without a PhD and I am more interested in research than in the types of jobs I would have been qualified for with an undergrad degree in psychology. It just happened, too, that the area I went in to has a lot of openings. I would not have been able to work in other countries as easily without an advanced degree'. (36, female, psychology)
>
> 'It has given me opportunity to pursue areas I am most interested in. I have established a small research and policy analysis firm and am thoroughly enjoying being self-employed'. (48, female, education)
>
> 'I have more options in academic-related fields. I have been looking at government and university policy design and administration jobs. I have also been taken very seriously by management and computer consulting firms. The title can add years of credibility'. (34, male, economics)
>
> 'Overall effects has been very positive - career goals firmly in place and achievable'. (36, male, chemistry)
>
> 'The doctorate helped me in obtaining position that I wanted'. (62, male, education)
>
> 'The doctorate opened doors to jobs I could not have had otherwise: academic, government (Director of Research for a government agency), consulting, private research institute. I have learned an enormous amount by working in each of these sectors, but have always managed to do that which interests me most'. (59, female, psychology)
>
> 'There have been advantages in terms of specific job opportunities and in terms of the kinds of activities I can initiate for myself and the kind of independence I can now generate. Certainly there are now greater opportunities for academic advancement'. (43, male, art)
>
> 'As a parent trying to make a difference in schools, I found no one listened. As a teacher trying to make a positive difference in schools, no one listened. But now as Dr._____ from the university, people listen - even though I'm still saying a lot of the same things. The degree does

carry some weight and prestige whether that is right or not'. (46, female, literacy)

'It has helped me to have a productive and happy career'. (48, female, educational psychology)

'I don't think I'd be doing any of the things I am know without it, and I wouldn't have the skills or ability'. (34, male, education)

'In some ways the effect was major. I went from only being able to wonder about what influenced my students' learning to actually being able to find out answers to these questions'. (36, male, bilingual education)

'It helped in promotion and a bigger salary'. (47, female, bilingual education)

'Possible promotion prospects this year, based upon doctorate and other factors within my current Uni where I have fulltime job'. (35, male, neuroscience)

'A huge effect. I wouldn't have obtained any of the positions that I have held nor made the same income'. (37, female, educational psychology)

Both Positive and Negative Effects on Career

'I now know that to be happy, I need to have a job that is more applied research than the basic research I was doing in grad school. I am glad to have had the basic background, but I don't want to be a pure researcher. I want to help people - I want to get the research off the library shelves and into society. So my post-doc helped me move in that direction (applying cognitive psychology to education). Unfortunately, there are not many opportunities advertised for such 'linking' positions between the real-world and the world of research. I will have to be very creative (and lucky) in my job hunting. It is going to be difficult to have children and still keep up with the field, but I will try. The kids will come first, though'. (33, female, psychology)

Negative Career Consequences

'There are no job opportunities in this geographical area in my field. I could not move to Virginia where the one job that fit me was located, because my husband already had a good job here, and his family had all moved to Texas to be near him!'. (35, female, psychology)

'Not being able to get a job as a white male has been a hindrance. I had to get a three-year post-doc, publish much more and still couldn't go up early for tenure'. (39, male, psychology)

'I have made myself too well educated for a return to the classroom, but I didn't do any supervisory certification, so I am limited in some ways. If I had administrator's certification and less literacy, I could supervise literacy people'. (45, female, literacy)

No Effects on Career

'Completing my doctorate has had little or no effect on the position I presently hold. I would like to switch from publishing and editing to teaching and researching, but the positions available in my field are few. I

am getting older and may never be hired for a tenured track position. In that sense, I am fortunate to have another career to support myself with'. (53, female, history)

'None. I secured my first position in tertiary teaching without having completed the doctorate. My two career paths since then have been shaped by my efforts within the positions I have sought and accepted. It's possible that the existence in my curriculum vitae of the title D.Phil.(Oxon) has had some influence on interview panels, but I doubt very much that any influence it may have had would be anywhere near as strong as the views and recommendations of my referees'. (50, male, literature)

Unsure of Career Effects at Present

'Hopefully I will get promotion and better responses in grant applications'. (40, male, medicine)

'None so far (only just finished): I'll get a pay raise'. (50, female, ethnic education)

Overall Impact of the Doctoral Experience

In summing up what the total doctoral experience has meant to them, once again, the bulk of replies were positive. There were 102 people (73% of those surveyed) who attributed positive personal outcomes to the completion of their doctorate. These included 41 people who made reference to their personal development through completing and obtaining their degree, 25 people who spoke of enhanced self-esteem, 11 who simply enjoyed the total experience and six who said they achieved enhanced social standing and earned respect from their possession of a doctorate.

Once again, there was a small group of four people who expressed mixed feelings about what their doctorate had meant to them, while there were 14 people who thought that the doctoral experience had been harmful or negative to them overall. This latter group included six people who thought that they had become a different person which they liked less than their previous perception of themselves, three who expressed overall disappointment with the doctoral experience, three who felt their family life had been disrupted or harmed and two who had become isolates in their view as a result of years of single minded focus on their studies.

Personal Benefits of the Doctoral Experience Overall

An Enjoyable Experience

'It was a marvellous experience and I'm very happy when I remember my time in the lab and studying up to late hours in the night'. (56, male, chemistry)

'It was an exciting, frustrating, eye-opening, exhilarating, experience. My family tell me that they share ownership of the degree, and I think they do - we all had an interesting couple of years, and met some great new people. In summary, it was fun'. (42, male, education)

Enhanced Self-Concept

'The experience that I gained shapes the way I look at myself and my work'. (44, female, medical)

'It's certainly helped influence my sense of who I am, as someone with a commitment to scholarship and serious inquiry, and to give me a degree of confidence in my abilities and skills'. (46, male, economics)

'I grew into somebody I can be proud of'. (42, male, education)

Personal Development

'Great personal growth enhancement, with moderate stress and demand from faculty/staff for personal adjustment. Some wounds are still with me, but I have been able to move on and build upon my strengths'. (36, male, chemistry)

'Personally I think I have matured a lot during the PhD despite the many difficulties and sacrifices along the way'. (38, male, medical)

'Personally, the doctoral experience has been a very positive experience for me. I've stretched my horizons and set new goals. I've proven that I could do it (with God's help)'. (50, female, education)

'What I value most is having met and known so many highly talented, committed and interesting students and faculty in the school of education and other departments in the university'. (36, male, bilingual education)

Earned Respect

'It brought me respect in both academic and social settings'. (50, female, science)

Mixed or Predominantly Negative Personal Effects of the Doctorate

'NEGATIVE - PERSONAL: This may not seem relevant to you, but I'll say it anyway. With deep regret, I date the beginning of my first marriage's disintegration back to the days in Oxford. There were other factors. There always are. But the mental and emotional state I got myself into during the Oxford years contributed significantly. POSITIVE - PERSONAL: The experience of spending such an amount of uninterrupted time with the books I very much wanted to read and learn from was a very positive one'. (50, male, literature)

'Because of the immigration I undertook it has had a massive impact on my family'. (40, female, psychology)

'Eight-ten almost wasted years. I missed my kids grow up and lost my marriage for nothing'. (43, male, education)

'The mystique and glamour academia had for me at the time of my masters is pretty much gone. My interest in researching and publishing receded as I realised how much schlock and poor work got published and I worked with nationally-known professors who had great reputations in the literature, and who were painfully lopsided, socially dysfunctional people who felt they had only their intelligence to offer. These were not happy well adjusted people, and their ability to influence the lives of grad students was personally horrible'. (41, female, literacy)

Answer: I learned a lot and had the opportunity to spend time with a bunch of very well-educated people. However, this gave me an unrealistic

view of how much the average person knows about the world'. (46, male educational psychology)

'It has meant incredible frustration personally'. (34, male, psychology)

'It was a horribly difficult experience, and has left me not feeling particularly confident about my ability to be a good researcher, which is what I'm interested in becoming. Friends say I'm more confident, I don't feel it particularly'. (48, female, social science)

Professional Benefits and Problems

Those surveyed were also asked to sum up what influences the doctoral experience has had for them professionally. There were 80 people (57%) who responded positively to this issue, with the following professional benefits being given: a new appointment or employment (26 responses), enhanced status and respect in the profession (13); enhanced career prosects (14); the degree was a necessity professionally (5); it resulted in promotion and higher salary (4) and it improved one's professional capacities (18 responses).

There were two mixed responses, while one person said that the doctorate had actually been a hindrance professionally.

Professional Benefits of the Doctorate

'Professionally, the Ph.D. has opened doors that would not have been available. It has given me a level of credibility that is accepted by school people when I make presentations. It has possibly made my few publications easier to have accepted'. (51, female, education)

'Professionally it opened lots of doors otherwise closed. Many more options are available'. (54, male, psychology)

'I learnt a lot about life and the East West Centre allowed interaction with the committee and cultures of Asia and the Pacific which opened up a whole new world for me'. (47, female, bilingual education)

'The doctorate has completely changed my life, enabled me to move countries, find employment in an area I enjoy'. (40, female, psychology)

'Professionally, it was the stepping-stone to a career in academia'. (39, female, psycholinguistics)

'It has meant pretty little professionally except insofar as I get the benefit of the doubt in many cases. I have been legitimised in many cases by the simple addition of PhD to the end of my name'. (34, male, psychology)

'It gave me status within my profession and has allowed me to have a working life that I have thoroughly enjoyed'. (60 male physics)

'I do believe my colleagues are treating me differently - especially the more difficult ones - more respect, more willing to talk to me about things'. (55, female, education)

'It gives me more autonomy and power as a woman'. (51, female, science education)

'Professionally, I have a place in the Club of doctorate'. (50, male, education)

'Professionally it has been more important, as an entry to the 'officer class' of researcher, and has given me greater opportunities for an interesting job, as well as a better salary. But it doesn't make me smarter, more effective or a better person. Pity, really'. (56, male, marine ecology)

'Professionally it has added a new dimension to my career'. (41, female, physical education)

'Professionally the degree has benefited me and given me a definite advantage over those who do not have the same qualification'. (52, male, literature)

'Professionally I'm pleased that a) I now have a 'real' job as a result, doing the same amount and type of work but being paid twice as much, superannuation, etc. and b) that I have a load of research which I can look to publish quickly, to establish myself further'. (35, female, history)

'Professionally, I'm finally doing the things I always thought I'd be doing - making a difference in kids' lives'. (32, female, psychology).

'In my chosen field, it is the entry requirement'. (44, male, psychology)

'Professionally, it will be necessary if I ever get around to going for the next promotion'. (55, female, education)

'The process of acquiring and using research skill has been the most satisfying and monetarily rewarding aspect of my doctoral studies. I find that I am usually far more interested in how to ask the questions and how to interpret the results than in what questions to ask'. (34, male, economics)

'I am proud to be a professional educator. I am a master, an artist and a craftsman at what I do, and my doctoral studies contributed significantly in my development'. (47, male, education)

'Perhaps I am a better editor for the experience of working through my own research project. Certainly I am a better researcher than I was when I started'. (53, female, history)

'It has given me greater opportunities for an interesting job, as well as a better salary'. (56, male, marine biology)

Mixed Professional Outcomes

'I guess I am somewhat ambivalent. I guess I am glad I did it. I am proud to have done it. But I feel like I was misled as a graduate student into believing the degree had more value than it has since afforded me. Sometimes I feel like I could have done just as well with the master's that I originally went to the school looking for - and don't quite know what to say to students here who ask me if they really need the PhD they are currently seeking. I am honest with these students about my experiences. I don't try to discourage them from attaining the PhD, because everyone needs to make their own decisions, but I think it is my responsibility to be the voice of reality - since I have suffered it'. (35, female, psychology)

Possible Hindrance of the Doctorate

> 'In beginning, it was my ticket for most jobs I could tolerate doing. Now, it hasn't helped me at all, and when I look into teaching in the secondary school, I think it might even be a hindrance because the district would have to pay me more than they would someone who just has a Masters'. (52, female, social science)

Influence of the Doctorate on Professional Practice

Overwhelmingly, those surveyed believed that the completion of their doctorate had improved their professional practices. There were 122 people (88%) who cited improvements in their performance of professional duties attributable to their doctoral studies. These included 68 (49% of those surveyed) who said they had enhanced supervision skills, 24 (17%) who said their doctorate had changed their approach to their work and nine people who said the doctorate had changed the nature of their work.

There were only six negative responses to this question, and these included responses such as the doctorate not being relevant in any way to current professional practice, or that the person was already working to their desired level of competence prior to the doctorate. There were a number who said they used their negative experiences as an object lesson of what *not* to do in their professional practice.

Changes to Supervision of Students

> 'My supervision practices are definitely informed by my own experience'. (40, female psychology)

> 'Yes, I am a much better supervisor than mine ever was. My experience was a concentrate of what not to do in terms of relating to one's doctoral students. I have learned substantially from my own negative experience'. (53, female, astronomy)

> 'Yes, to the extent that I try not to emulate the negative behaviours I saw exhibited by many faculty in my previous department towards students and supervisees. It doesn't always work for me, but I can often catch myself doing less than nice things in my own role of supervisor of student employees and try to correct it'. (30, male, psychology)

> 'Yes, very much so. I try to be as conscientious as my own supervisors were, and to think more carefully than they did about the wider climate of support required by research students. I try to ensure that all doctoral students have a thorough grounding in research methods; that they have more than one supervisor; that they have very clear ideas about what support they are entitled to from myself and my colleagues; and to help them see themselves in a wider context (e.g., by encouraging participation in international scholarly and/or professional activities etc.). I also try to help create a pro-research ethos in our department as a whole, but not such a fiercely competitive and critical one as I experienced'. (46, male, economics)

Changes to Work

> 'I now work twice as much because as well as teaching a full load I am involved in a number of research projects (I didn't do research before as part of my job)'. (43, female, education)

'I have been able to use all the material I came across for courses I teach in and have been able to embark on new teaching areas. In that sense I have been professionally renewed'. (43, male, education)

'I think more holistically about my job and plan long term strategies and projects'. (47, female, health)

'I will be more independent and have my own research interests rather than working on someone else's project. While I still hope as a junior faculty member to have mentors, I think it is time for me to begin to mentor. I haven't arrived on campus yet and one of the students who met me during the interview process has asked me to serve on her committee. From my experience with my research chair and another faculty friend, I have come to understand what it means to be faculty - to be autonomous and pursue scholarly interests'. (44, female, medical)

'It has given me more confidence to continue to do what I already knew, and has given me more tools, research, and skills at doing it'. (46, male, education)

No Influence on Professional Practice

'I was teaching and advising doctoral students while I was one. Very little of my teaching style comes from models I observed in grad school (fortunately)'. (46, male, educational psychology)

'The dissertation experience, which was supposed to teach me how to do research, didn't. The course work was valuable preparation for the economic analysis I do'. (50, male, economics)

Views on the Requirements for Doctoral Success

Personal Qualities Needed To Succeed

Many people gave more than one personal quality required for doctoral success, but overwhelmingly the most common response could be summed up with the words perseverance and tenacity, which 127 people (91%) saw as essential to doctoral success. This was followed by intellectual ability (52 people), interest and passion (38), clear goals and purpose (35), self-esteem (19) and personal management capacities (10). There were over 40 other things mentioned, the most frequent being creativity (7), a sense of humour (7), emotional maturity (9) which included being able to deal with frustration, rejection and failure, and writing skills (5).

Perseverance

'A determination to continue on, even when benefits are unclear. A determination to bring years of study to a conclusion, even if that conclusion feels unclear or unfinished'. (48, female, psychology)

'Getting the doctorate in the minimum time takes persistence, ability to say 'no' to anything unrelated to the study'. (46, female, education)

'Stubborn persistence'. (34, male, psychology)

Self-Esteem and Confidence

'Another trait that helped me was self assurance. So many others looked at the professors as superior, and I took them on more as equals. After all, I had far more classroom experience that they did. I think this attitude helped me get through more easily'. (45, female, literacy)

'Depends on how one defines successfully undertakes. I think one must have a strong sense of self, a strong sense of what one wants and believes'. (46, male, education)

'Belief in oneself as a learning being'. (59, male, educational psychology)

Personal Management

'A person needs to manage the process - it is another project to manage. If you focus only on the work and neglect the process (completing forms, observing deadlines, conforming to administrative rules, etc.) you may still fail'. (44, female, medical)

'Having good organizational skills helps'. (30, female, maths)

Intellectual Ability

'A love for ideas and patience for gathering a multitude of views, data, etc. An ability to integrate and synthesise'. (48, female, psychology)

'Generally PhD candidates have to have sufficient intellectual capacity'. (52, male, literature)

'The smarts to research and develop a previously unchartered section of their field'. (30, female, mathematics)

Interest and Passion

'Interest in the discipline'. (52, male, educational psychology)

'You need an obsessive personality. You must be intrinsically motivated - completely hooked by the topic and believe it is enormously important'. (60, male, psychology)

'Perseverance and a burning thirst to KNOW and to UNDERSTAND about something'. (47, male, psychology)

Clear Goals and Purpose

'A person needs to be goal-oriented and willing to make sacrifices to attain those goals'. (44, female, medical)

'You need to know why you want the degree, what you expect to do with it, and what difference it may make in you life. Consider the obstacles before you start the process (there are many)'. (50, female, education)

Miscellaneous Personal Qualities

'Low distractions in the environment (singlehood!)'. (36, male, chemistry)

'Lack of pre-school age children is a distinct advantage - especially if you're on your own - even excellent childcare will not overcome some of the tensions between little kids' lives and needs, and intellectual work'. (40, female psychology)

'A certain humility and openness and most of all a driving need to answer questions that are significant'. (43, male, art)

'The need to be able to take feedback from faculty members instead of being defensive about their work. Part of learning is keeping an open mind and listening to other's viewpoints'. (44, female, medical)

'A sense of humour'. (41, female, physical education)

'It is very easy to say you are working on your dissertation, but it is hard to actually sit down and produce something tangible. I wasted several months deluding myself that I would come up with the perfect research design, analysis, discussion section, etc. After I was done daydreaming and committed something to paper, it was respectable but was something I could have done in a far shorter time frame without sacrificing quality'. (35, male, psychology)

'Being able to play the academic game, get the correct theory - i.e., the flavour of the month and play the game for all it is worth'. (43, male, education)

Unsure

'I don't know what is needed. This is a measurement problem that I have been unable to come to grips with. I think that the needs are so specific to field, candidate, economic and social conditions, interpersonal relationships between student and faculty members, etc., that there is no optimal set of skills or personality traits that lead to success'. (34, male, economics)

'The dangerous hurdle is the dissertation. Nothing in the normal program of elementary school, high school, and college prepares a student for this. Not even for the first step of finding a topic. In fact, especially for that first step. So the vast majority of students have to stumble through it. Of those who succeed in doing that, the vast majority (like me) don't really learn how to do research, so they never do any other research and they never publish anything'. (50, male, economics)

Other Factors Contributing To Doctoral Success

Aside from personal qualities mentioned above, the factor contributing to doctoral success most commonly given by those surveyed was the supervisor and faculty/department, which was mentioned by 75 people (54%). Other factors given were support of family and friends (28), resources, finances and equipment (25), intellectual ability (22) and matters related to topic selection (16 of those surveyed).

'As one of our profs said, remember that there are brilliant dissertations and there are finished ones. Set a plan, with time lines etc., and try and stick to it'. (42, male, education)

'An understanding family wouldn't hurt'. (40, female, psychology)

'A supportive and understanding network of family and friends'. (43, female, education)

'Supportive friends or family'. (60, male, physics)

'Competent faculty, who can stimulate students to think'. (64, male, radiochemistry)

'Faculty or other staff who are willing and able to explain to students the inner-workings of the system. I found that the most successful fellow students seemed to be those for whom graduate school had been de-mystified and saw it as belonging to them and not as an intimidating ivory tower'. (36, male, bilingual education)

'Support, challenge, an exacting supervisor, a good peer network, a rich intellectual and social life in department, excellent resources, good office and technological support, access to the wider academic community, mentoring as far as being strategic about doctorate and career'. (42, female, literacy)

'Strong belief by the faculty that the student has what it takes'. (54, female, education)

'A carefully delimited project, the relevance of that subject to the contexts in which that subject functions (in order to gather information, test responses and conclusions, and generate the kind of interest in one's work that is useful for feedback)'. (43, male, art)

'The authentic desire to learn by doing and selecting the research subject that you really like and enjoy working on it'. (56, male, chemistry)

'A project you totally believe in, that is 'do-able' and is soundly grounded in the real world'. (46, female, literacy)

'Pick a dissertation topic that you really like, because you will hate it before the last page is written'. (48, female, social science)

'A good command of the language being used to write in, ability to work independently, some intelligence and common sense'. (47, female, bilingual education)

'The ability to research well. Critical thinking abilities'. (30, female, mathematics)

'Financial support for graduate students and faculty who are interested in supporting their students' research'. (30, female, psychology)

'Few institutions allocate resources to doctoral candidates - resources, facilities and supervision which are justified. Whereas funding authorities provide institutions with significant funds for doctoral candidates,

typically these funds are siphoned off to other areas. In other words, it seems to me that funds for doctoral candidates used to subsidise other activities in tertiary institutions whereas the reverse should be the position - doctoral candidates should be subsidised and strongly supported with the highest qualities of supervision and general resources'. (63, male, management)

'Financial stability would probably help but most of the people that I know that got through in Cambridge were pretty poor like me!!'. (35, female, neurophysiology)

'Resources are an important part of the experience; with too few, it becomes too great a burden for both students and faculty to engage in the real intellectual tasks of understanding and creating new knowledge. There is a threshold for successful doctoral programs in resources, a critical mass of faculty (at least two in a field, preferably three or four; more simply creates competitive cliques), and a critical mass of doctoral students. Too few and they are isolated, too many and they can be lost in the degree mill shuffle'. (49, male, educational psychology)

'I'm not aware of any doctoral programs that actually teach students how to do research. But my son's high school program does, so let me tell you about that. (This is a select program in math and science, at Blair High School in Silver Spring, Maryland.) Ninth graders, in their first semester, enter a competition sponsored by NASA to write a research proposal for a project in space sciences. They are expected, and taught, to go to a research library to find articles on a topic that interests them, use that to get a general notion of a researchable question, find other articles that have studied the topic, and finally write up a proposal that extends the published research. My son's grade school science fair projects were traumatic (especially finding a research topic), but he's succeeding quite comfortably in this program. Rather a better strategy than simply asking students to stumble through and figure it out for themselves, don't you think?'. (50, male, economics)

Other Comments

Often, the question at the end of a survey or interview schedule which asks for 'any other comments' often elicits the longest, most reflective and thought provoking data. This study was no exception. What follows are some of the most interesting of those supplied by those completing our electronic survey:

'Never Again'

'I would never elect to go through it again knowing the tremendous amount of work and sacrifice that it takes'.

'I'd like to know how many others would do it again if given the choice. I don't think that I would. I would have taken my college professor's advice to do an MD. And I say that even knowing that I didn't have the worst doctoral experience'.

'I think I've made them all. I'm very glad I did it, but I would NEVER want to do it again'.

'If there is anything a person could imagine doing outside of earning a doctorate, I would encourage him or her to explore that option instead of taking the route of the PhD'.

'I won't do it again. Even though there are many other areas of study that interest me, I'll study them without getting another degree'.

'I'll never do it again although I did enjoy it while it lasted I suppose. For me the process was fairly easy but if I did not have the job that allowed me to do it along with the institutional support I would probably not have even started'.

Rewarding, but a Price to Pay

'I could not have completed the doctorate nor gained from it what I have unless I devoted my full-time commitment to it. I cannot imagine the tensions that must exist in completing a doctorate while working and having family and other commitments'.

'I'm glad I was no older when I did it, but wish I'd had the option of completing it without tearing up the rest of my life'.

'It is a lonely experience, only you can do it. It turned into a very negative experience for me but I love having my doctorate!'.

'It gave me some pretty valuable information about my own limitations, and helped me clarify a number of things about my personal and professional directions in life - and the price paid for this benefit to me was very high'.

'It's probably a good thing that I didn't know how difficult it would be to get a PhD - if I'd known, I might have been afraid to do it! It's made for a fascinating mid-life crisis!'.

'I have avoided filling out the survey because it has awakened feelings and memories that I am not sure I want to deal with. Attending my disciplinary conference last week confirmed my feeling that I do not want to be anywhere near the mainstream in my field and may want to abandon it entirely'.

'The hardest thing for me to accept about the students I teach today, is how marginal their academic pursuits are to their lives. In part this is because of the awful financial strain they are under, forcing them to spend much too much time earning money, and in part because they are spread too thin in terms of their interests and are trying to live 'normal' lives while doing the degree. I don't think this is the best way to do it. I relished being able to immerse myself in my studies and I think that is why I got so much out of it. Without that, the experience is somewhat superficial, and one gets that much less out of it'.

'It's not for everybody. In education, I think it is terribly important that people have prior field experience. We had colleagues (doing their PhD in Ed. Admin) who had never had an administrative position. That is ridiculous. They complained that we always placed the theory in to an experiential context and they felt left out! Surely this is the whole purpose of further study? People should not undertake doctoral studies simply for something to do, we need no more dilettantes'.

'I have been very lucky. I had great support, access to information and people and I was determined to get it over with as fast as possible - my examiners actually all replied within 6 weeks! Even then, it has been a massive strain on my family and myself. In tertiary education we need to be aware of the needs of PhD students, particularly mature age ones, and we need to demonstrate that getting the PhD is rewarded by the institution. Money alone is not the answer, but there is a common feeling that PhD's are hell and have to be hell, lets just leave them that way. My own supervisors both lost partners due to their PhD's - they did their best to include my wife in every aspect of the process so that the same wouldn't happen to me. But I have several other colleagues whose lives are in turmoil because their PhD's (done in other institutions) are bringing them grief. As a base requirement for academia, maybe the whole PhD system should be reviewed? I am now part of a support team for our institution's PhD students. There needs to be a lot more support. giving time off helps - but only during the writing stage. I can think of two colleagues who are now at home fretting because they have been give leave and are not at a stage to complete. they are at home with the kids fretting'.

'I suppose I should mention that I was under some obligation to submit my dissertation within four years (not be awarded it in that time though). At the time I was completing, the ESRC had introduced the rule that universities had to have a submission rate of 25% in 1987 or they would lose funding. Given that there were only four ESRC funded postgraduates ready to submit in that year and the other three could not (for various reasons), I was the only one who could submit and thus enable the university to meet the 25% criterion. This was a deciding factor in my writing-up within a year of completing the groundwork. Morally, I felt obliged to ensure the university did not lose funding due to my inability to submit within the time span. I would like to add that it was an incentive that I probably needed as I may still have been putting it off years later had I not had that responsibility placed on me!'.

Problems with Programs and Other Concerns

'In the years since completing my doctorate, I have become acquainted with other programs and with other candidates for the doctorate. Many of the programs have provided graduate students with opportunities to participate in the preparation of grant applications, opportunities which were not routinely offered at the time and in the Department in which I earned my doctorate. Since research careers are likely to depend on skill in obtaining grants, this strikes me as a valuable opportunity for a graduate student. In the United States today, many more people have doctorates than 30 years ago. But academic positions for new doctorally trained persons are harder to come by. Many who might have aspired to academic careers must now look to employment in private industry, where they may not be as free to follow their interests or to share their findings as they might prefer. The journal Science, organ of the American Association for the Advancement of Science, has given some attention to this issue. The Republican-dominated Congress of the United States is now decimating many of the research and training programs which have supported research, data-gathering, and doctoral training of the sort in which I have been interested and which seem to me to be important for the nation's - and the world's - well-being. It will be years before we can re-build such an infrastructure, and much will be irretrievably lost'.

'I'd like the focus of doctoral programs to be more the real world. Encouraging dead writing for academic scholars who don't live in the air and/or who no longer have blood in their veins, is a very limiting, self serving process that produces divorced scholars. I believe that research has its place, and journals and conferences can have their places too, but too much of the doctoral work is about marking territory and politics'.

'Like the paradigm shift that has occurred in research, there needs to be a major rethinking of what a doctorate, and a doctoral program is, and what it could/should be. Until the academy acknowledges the personal lives, and particularly for women, the family/mothering roles in our lives as a CRITICAL and VALIDATED part of WHO we are and what is IMPORTANT, the same old boy way of doing things, the same 'I went through this hazing so I'll put you through it too' approach to graduate school will continue. It is NOT to the credit of the university graduate education system, or those who work within it'.

'I think that too many students expected to have their hand held through the whole experience. While I think it is important for universities to have support mechanisms such as a grad student adviser, a social program for the students in a department, and a clear mechanism for students to air grievances, I don't think it is an adviser's duty to be a parent figure. I think that advisers should treat students fairly and equitably and not allow themselves to get personally insulted if a student wants to change advisers or topics'.

'I would like to see rigorous standards for doctoral research. I see some people getting by on political or social factors. This bothers me'.

'I'm not sure that my experience is typical. I didn't allow the program to take over my life - I had too many other things going on to allow that. I found the coursework to be mostly boring and mostly very easy - to the point that I did not have to spend time studying for exams - that was a great help. I also found that many of the students in my program really should not have been there. The calibre of student was not always good. They certainly would not have been accepted at a Scottish university! The internships were a pain in the butt for me as I was working full time. That meant that I was sometimes working 3 jobs just to get the internships completed. That's crazy!'.

'I've tried to be as complete and honest as possible. Perhaps I'd have done better with a more involved supervisor, because I might (or might not) have learnt some useful skills and attitudes, but I've learnt them in the end with the help of my many colleagues, so it probably makes little difference in the long run. Last thought; PhD research is inevitably a lonely experience in some respects. Perhaps the major personal benefit to successful PhD students is that they actually DO achieve their goal. To be tested and not found wanting is for some people a very enlarging experience. Ask Beowulf'.

'Personally, I view the doctoral program from two perspectives. The diss writing itself is actually an exercise which the significant majority of grad students appear able to handle without too much difficulty as their skills are more than adequate otherwise they wouldn't be in the program in the first place I suspect. The real test is the ability to cope with all the bureaucracy, egos (exercise of power) or conversely, lack of interest which surrounds the actual writing. Also, my experience has been that the general public image of collegiality in post-sec institutions is a myth and

that universities suffer all the organisational ills (i.e., inefficiencies, irrationalities, power struggles, etc.) found in the private sector. Collegiality is at best selective and guarded'.

'I think if I had been in a program with supportive faculty all of the other bad experiences might have been tolerable. I think faculty support is really the key, although other issues are important, especially finances if you have a family'.

'About being a female in the world of science: science is still a man's world that favours the male over the female. I have learned to think and act like a male. I was quiet when I got married during the last year of my graduate studies because I knew that some faculty did not approve of this. I never even considered having a baby in graduate school and now that I am looking for a post-doctoral fellowship I still feel like I will be overlooked if I have a baby at this point. I was recently asked in one of my post-doc interviews if I was planning on having kids. I had already decided to wait to have kids until my career is stable but how do they know it and not discriminate against me?? I was also on a graduate student selection committee in graduate school where a male faculty person suggested that a prospective student's application be questioned because she was single with a child. He was silenced by the committee chair (a woman) but he still thought it and said it'.

'I made a few mistakes (O.K., more than a few), throughout my studies which made me fall down. The important thing, is that I could get up and move on. The environment which accepts such growth is important to the development of a mental health professional (very important in compared to other doctoral programs)'.

'Overall it was a positive experience. I don't think I really understood what I was getting into. Often felt that I didn't know what faculty were looking for in oral exams, etc. Even when I passed, wasn't really sure why or what I could have been done differently'.

'U.S. Doctoral programs are arcane. We know much more about learning and psychology but we still use ancient methods'.

'Well I am not as bitter as this may have led you to believe but furious about what happened to me. My experience is not all that uncommon as I have acquaintances with first class honours degrees and university medals who have been stuffed up by the system. The person who did not pass my dissertation did the same to others at the same time. The fact that he was a particularly nasty individual who was going through his own personal crisis is no comfort to me'.

'I am aware that, by comparison with others, I had a very good experience and to some extent this was fortunate. on the other hand I did do my homework very thoroughly before embarking on the program and before choosing my supervisor'.

'I think it cannot be underestimated just how important choosing the right supervisor for you is and trying to get a balance between study and real life (nothing like having young children to do this I found!!)'.

Accomplishment and Fulfilment

'I really wanted a PhD. Not just for the job but because I like the University lifestyle, the people, the autonomy and the freedom. I do not think that doing a PhD is a rational thing. Especially not if you are a bit older. You do it because you really want to do it'.

'I had a master's degree in another field when I entered my program. This time, however, grad school pushed my limits. I learned that I could handle challenges that I didn't previously know existed. I think that rock climbing prepared me for grad school. Once you're on the rock, it's up to you if you're going to fall off or climb all the way sweaty way to the top. And it's a great feeling when you realise that it was a job well done'.

'I often though I was absolutely crazy to be working towards a Ph.D.. The program brought with it frustration, anxiety, tension, doubt, and abject terror but I wouldn't have missed it for the world. I made it! It was a hell of a personal journey. I learned a lot about myself and some about my field. I feel like I know very little about anything at times and am still filled with doubt and wonder. I know I can reach my goals though. I just have to settle in and then settle on the next golden ring which glows just out of my reach'.

'I am very glad that I did it. If I had realised at the beginning what all would have been involved I might not have done it (and I had already put my ex-husband through a doctorate program, so you would think I would have known what would happen. The difference there I think is that he was in the sciences and I was in a research-intensive, funding-poor humanities field. It may also be true that you can never know what the experience is like until you do it yourself.). I think I am a much more thoughtful, better-prepared person for the experience. I think that my department was wonderfully supportive in ways that I needed (although not financially, but I managed anyway). My parents and my children were also supportive in their own ways. I am very glad I did it even if the degree never means a penny more in earnings'.

'I believe I was exceptionally fortunate to have the right circumstances in place when I undertook my studies; under less than optimum conditions I may not have completed the program of study'.

'I wish I could give all my students an experience as good as the one I had'.

'It was a great, treasured experience that created almost all that followed for me'.

'A doctoral experience is like any other, in that all experiences are unique and idiosyncratic to the individual. A 'program' is perceived by each individual in terms of the perspective one brings to it. I knew colleagues who found our doctoral program to be unsatisfactory for them and so they left or bitched incessantly if they stayed. I found the program to be very satisfactory and so I stayed and had a great time. But then I usually have a great time, even though I can get overwhelmed by life and work and get bummed out, too. Regarding your study, thank you. I have not thought much about my doctoral program which I experienced 30 years ago. Keep your sunny side up!'.

'Congratulations to all in this survey and all other PhDs. What you have done, not all can do. Be proud of yourselves'.

'I thought the experience I had was great - no complaints. I have more complaints about this 'academic' life'.

'It was fun to decompress! (I'm graduated now, but I receive my doctorate in February'.

'I'm glad I did it and always encourage others to try'.

'I think, at their best, doctoral programs epitomise what education should be about - sharing life-changing experiences. John Dewey said, "I believe Education is a process of living, not a preparation for living." That certainly applies to working on a doctorate'.

'It was a great time. I'd like to go back and do another one'.

'By choosing a topic `outside' conventional areas in my discipline I chose to make my own doctoral path harder than necessary. I have not regretted this. The possibility of opening up new areas of theoretical and research interest in the course of doctoral study seems both appropriate and advantageous to the discipline itself. To me it was a time of intensive, creative involvement with the work of theorists I admired and respected and my own ideas about that work. this seems like a privileged time in which my `academic freedom' reached its height'.

'While going through the process, there were several times I thought some of the steps seemed unnecessary. Looking back on the experience, I have a much better appreciation for the process. Perhaps that means I have just been successfully assimilated into the club, but I think it has more to not knowing as a student what I needed to work in my chosen field. Now that it is over, some of those experiences which I dreaded turned out to be invaluable'.

'Even if I never get a job that requires a PhD, I still have a lot of useful skills and the prestige that comes with having completed a difficult degree program'.

'It was a long, but rewarding experience. I realise my experience is not necessarily typical. My personal life and the genuine respect I received from faculty from the very outset of the doctoral experience greatly facilitated my completion of the doctorate'.

Chapter Seven now considers the lessons and implications of the study.

CHAPTER SEVEN

LEARNING FROM AND IMPROVING THE DOCTORAL EXPERIENCE

Introduction

In this study, we have explored the doctoral experiences of 139 individuals. We make no claims about the 'representative' nature of our sample – the notion of obtaining a truly representative sample of international doctoral holders boggles the mind.

Yet strong trends and issues are evident in the findings which – if generalisable – have important implications for doctoral programs, those who support and provide these and for doctoral candidates. Certainly, many of the results of our study are consistent with much of what we know of the doctoral experience from prior research.

To begin this final chapter, the major findings of the study are drawn together. We then discuss the issue of improving doctoral programs, before providing some concluding comments.

Greater in-depth analysis of the data from what is still an on-going, iterative project is continuing[1], but we feel that there is sufficient material and findings presented here for some important debate and dialogue to occur. To facilitate this process, we would welcome feedback and discussion on what is presented here. Once again, the intention of this work has not been to extensively review the literature but to hear the voices of those actually involved with the process of completing a doctorate.

Major Findings of the Study

While difficulties encountered in completion of a doctorate were explored in the study, all our sample were successful doctoral candidates. However, there were some who came perilously close to withdrawing or failing, and their experiences in particular may prove to be valuable in adding to our understanding of doctoral attrition, a matter considered in our opening chapter.

Revisiting the Sample

One hundred and thirty nine people completed our electronic survey, 65 men and 74 women. Most were awarded the degree of Doctor of Philosophy, with the next largest group being awarded a Doctor of Education degree. The majority of those participating in the study were citizens of the USA with the next largest group being Australian. The predominant pattern was for the participants to have lived and studied for their doctorates in their 'home' country. As might be expected, of the small number who travelled abroad to study - the majority of whom were Australian - the bulk of these were men.

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[1] We have, for example, carried out a follow email survey to investigate more deeply the matter of poor dissemination raised by this study, and we intend to pursue the matter of non-completion more fully.

Almost half of the participants were aged in their thirties when their doctorates were awarded, with most of the remainder being equally in their twenties and forties. Men were more likely than women to have completed their doctorates in their thirties, while women were more likely than men to have completed their studies in their forties. In these respects, the sample is typical of doctoral holders generally, where women are found to be more likely to complete their studies later in life than men.

Most of our participants were recent recipients of a doctorate, with over half having completed their studies in the 1990s. Once again, this situation is to be expected, given the great expansion of postgraduate study that has occurred in many countries during the 1980s and 1990s.

The majority of participants completed their doctorate in three to five years. Once again, the pattern of time taken reflects the general tendency of women to take longer to complete than men, with more women taking five years to complete than men, and being less likely to be able to complete in two to three years. Those completing in the science and technology areas were found to take less time to complete than candidates in the social sciences and humanities, a trend once again congruent with the general population of doctoral holders.

Men were slightly more likely than women to study as full-time students for all or most of their program. Men were however, much more likely than women to be married doctoral candidates, with there being less difference in regards to parenting, with around half of both women and men having the care of children during their programs, the implication being that women, even when single, are still likely to have responsibility for parenting. Women were also much more likely to have experienced a change in family circumstances following completion than men, possibly indicating that women are more likely to put things such as marriage/remarriage and childbirth 'on hold' during their doctoral studies, and the fact that, in a small number of cases, divorce or separation accompanied or followed the doctoral process.

A pattern thus emerges of women being less likely to be married, but more likely to have sole parenting responsibilities, being older at commencement of doctoral study, taking longer than men on average to complete requirements for the award of a doctorate and being more likely to experienced changed marital and family circumstances in the period following award of their degree.

The current occupations of those surveyed tend to support the notion that the doctorate is primarily a vocational qualification, with two-thirds describing themselves as either university academics or researchers, while a further group were in some form of administration, usually at a university.

Entering a Doctoral Program

The influence on role models on undertaking doctoral study was mixed. Some had positive role modelling from siblings and parents, while for others, particularly women, there was discouragement from pursuing tertiary studies. Absence of role models, either positive or negative, was usually associated with no family history of tertiary study, with over a third of those surveyed having no or only one parent with such qualifications. However, in other cases, higher education and in fact education

generally was highly prized by families where parents had been denied educational opportunity.

As far as individual motivation to undertake doctoral study was concerned, over half of those surveyed gave what could be labelled as extrinsic reasons for undertaking a doctorate. These included such things as improving one's career prospects, gaining enhanced standing and credibility and completing what is an expected 'rite of passage' within certain professions. Only four people mentioned higher income as being an important motivating factor in their decision to pursue a doctorate.

However, a greater number gave what could be called intrinsic reasons for enrolling in a doctorate, obviously with some experiencing a mix of extrinsic and intrinsic motivations. The most common intrinsic motivation was the desire to study in greater depth a field of study which the individual found fascinating and compelling. Some said they enjoyed academic life and wanted to continue studying, while others sought the stimulation of a doctoral program. Finding their work fun, interesting and important and wanting to continue and extend it were also mentioned.

In some cases, it was obvious that while the initial motivation might have been largely extrinsic, e.g., obtaining the qualification in order to gain employment or promotion, intrinsic motivation grew as the person became enamoured of the study area and was 'drawn' into the process. This begs the question of whether those possessing mainly extrinsic motivation are less likely to complete a doctoral program, a proposition supported by later comments of those surveyed when asked what they saw as essential to doctoral success, the answers to which were overwhelmingly to do with intrinsic drive and motivation.

Factors Hindering the Undertaking of a Doctorate

Despite the fact that those surveyed had successfully completed their doctorate, two-thirds gave evidence of reasons, circumstances or events that had significantly hindered their doctoral progress. By far the most common of these was financial difficulties. The next common barrier or problem was related to family life, often caused by the commitment of time and energy needed, with financial difficulties and family lifestyle problems being related for many of these people.

Other problems mentioned included having to hold down a full time job while studying, lacking confidence, cultural difficulties and isolation, lack of family support, discrimination and problems dealing with university administration.

Overall, women were more likely to mention such problems, quite possibly resulting in the longer and later in life completion times they recorded in comparison with the men surveyed.

Choosing the University and Faculty/Department

While geographic proximity was the major single reason given for choosing a particular university at which to undertake a doctorate (given by over one-third of those surveyed), the remaining reasons were overwhelmingly concerned with the university itself, with the reputation of the doctoral program, the desire to work with a

particular supervisor, the overall reputation of the university, financial assistance provided by the university and having studied or worked at the university previously all being noted. The two most common reasons given in combination were proximity of the university and quality of the doctoral program.

One theme running through many of the reasons given by those surveyed for choosing the university where they completed their studies was the proactive and friendly nature of departments and potential supervisors in responding to inquiries and providing assistance and encouragement with applications. Often, this alone was enough to sway a candidate's choice of university, other things being equal.

Difficulties Being Accepted into a Program

Perhaps reflecting the ultimately successful nature of the sample, more than two-thirds of those surveyed said they had not experienced problems being admitted to a doctoral program. The problems experienced by the remainder centred on non-acceptance of qualifications, limited places in doctoral programs and a lack of background in the proposed area for study. Other problems were to do with a lack of a suitable supervisor, administrative difficulties and perceived discrimination.

These problems were overcome by a combination of personal tenacity and assistance from key university staff, but it does beg the question of how many potentially successful doctoral candidates are precluded from programs because of initial procedural problems that can be fairly easily addressed and overcome.

Qualifying Programs

Forty per cent of those surveyed were required to complete some form of qualifying or bridging course prior to gaining entry to their full doctoral program. Of these, over half had to take an entrance examination while half had to take some formal courses. Some obviously had to do both.

The general view of those undertaking such programs was that this had been a reasonable expectation and that they had benefited from their qualifying procedures and experiences in that they had been better equipped for doctoral success. Some, however, viewed such requirements as unnecessary, time consuming and not relevant to their needs.

Nature of the Degree

The nature of the degree undertaken was largely a function of geographic location, those studying in North America completing both courses and a dissertation (70%), while those studying in countries such as England, New Zealand and Australia mainly followed the traditional pattern in those countries of a research dissertation only. Of the former, there were complaints about the sheer number of courses that had to be completed, some of which were seen as superfluous. In addition, because of the scheduling of courses and the need for attendance, this created problems with employment and family life for some of those surveyed.

Choosing and Gaining Approval for the Area for Study

Advice from a supervisor or other faculty member was the major reason for selecting a particular topic or area for study, followed by the nature or subject matter of their current career or occupation and personal interest. Following on from and studying in greater depth a previous area of interest and investigation was also a major reason for choosing a particular topic for study for those surveyed. The specialisation of the department or faculty was mentioned by a small number of respondents as being important in choosing an area for study, although there were a number of comments about being pressured to fit in with others' interests and to employ methodology others were familiar with or committed to.

Related to the above issue, 12% of those surveyed experienced problems gaining approval for their research topic, and once again, this tended to be due to methodological differences with supervisors and other faculty and a lack of understanding or support by supervisory committees for what was being proposed by the candidate, according to those surveyed.

Completing the Doctoral Program

A quarter of those surveyed felt that supporting themselves had been overly difficult during completion of their doctoral program. The major problems were financial difficulties and having to make lifestyle sacrifices because of difficulties balancing work and study. Over a quarter of said they had been employed full time while completing their doctorate, something which both lengthened time taken for completion and placed pressure upon themselves and their families in many cases.

Almost a quarter of those surveyed said that there had been no facilities made available to them by their university during their doctoral program or that those provided had been unsatisfactory. Under half had an office, usually shared with other postgraduate students, while a third had a computer provided, also shared in many cases. Over a third had either an allowance, special infrastructure support or special library facilities. However, these facilities were not uniformly available, as 14% said they had all of the above made available for their use, while others had nothing in the way of facilities aside from regular libraries and student services.

Fitting in and Being Accepted

Fitting in to the department or faculty was a problem for a third of those surveyed. For those who experienced 'fitting in' problems, methodological 'clashes' were again prominent, while some felt there were 'political' reasons behind their non-acceptance. Others said they felt lost or disengaged during their doctoral studies.

Those from other countries and or different cultures were most likely to experience problems fitting it and being accepted, according to the comments of those surveyed.

A theme running through the responses to the question of acceptance was that the support of peers, i.e., fellow students, was very important, particularly when support from faculty was absent. On the other hand, there were many respondents who commented favourably and with affection about how they were made welcome,

accepted, and integrated into the department or faculty, feeling part of a supportive community of scholars.

Supervision and Supervisors

The most common form of supervision, experienced by a quarter of those surveyed, was that of a chief supervisor and committee, while a committee alone or a major supervisor only were also common models. Other forms of supervision were a major and minor supervisor and co-supervision. The remainder had some other form of supervisory arrangement, such as a research team.

There was a minority of those surveyed who said the form of supervision they experienced was not to their liking, while a small group expressed ambivalence about this issue. The remainder approved of the type and nature of their supervisory arrangements, although the matter of the quality of supervision they received is quite another matter, an issue taken up shortly .

While the form of supervision was not normally negotiable, over half of those surveyed said they had provided some input to the personnel providing supervision to them.

Quality of Supervision Received

The majority of those surveyed expressed satisfaction with the quality of their doctoral supervision, while some had mixed feelings (18%). The remainder expressed dissatisfaction with the quality of supervision they received as part of their doctoral program. Usually, this dissatisfaction stemmed from inadequate access to the supervisor, the supervisor being 'too busy' with his or her own work, lack of timely and constructive feedback or clashes of various sorts. In some cases, the candidates either sought out or were supported by other faculty members who provided informal supervisory support.

Regularly scheduled meetings which might have overcome some of these problems were experienced by only a minority of those surveyed (12%). Informal contact (40%) and arranging meetings on a 'need to' basis (29%) were the most common form of contact arrangements. The remainder said they experienced either no or intermittent contact with their official supervisor or chair of committee.

These matters aside, a large majority (80%) of those taking part in the study said they were satisfied with the relationship they enjoyed with their supervisor, citing benefits such as becoming real friends, developing mutual respect, shared professionalism, and developing a friendly yet professional relationship.

Of those who found the relationship unsatisfactory, the fact that their supervisor had other priorities, and gender and other clashes predominated.

Changes and Adjustments to Personal Life

The demands of the doctorate necessitated changes in personal life and circumstances for the vast majority (91%) of those surveyed. In line with the observation that for mature aged students, fitting the doctorate into one's personal life is more important and difficult than fitting into the program, the major changes experienced revolved around personal and family life, changes to life outside the family, financial changes and work changes.

Personal problems, difficulties and crises were experienced by over half of those surveyed, with the most common involving relationships, finances, lifestyle, health and problems with supervisors.

Means of coping with these personal problems centred on 'working through it', reprioritising, working harder and obtaining formal help. Other means of coping included support from family, friends and faculty and supervisor.

There were also positive personal aspects of completing a doctoral program noted by a quarter of those surveyed, including making new friends, being exposed to new perspectives, academic rewards, enjoyment of the academic lifestyle and learning more about oneself.

Mandatory Course and Other Formal Requirements

There were no additional mandatory requirements, aside from coursework where applicable, for a third of those surveyed. Of the remainder who were required to complete additional activities, the most common were, in order, departmental presentations, presenting reports, giving a series of lectures, attending conferences, and publishing a paper or presenting a proposal. Some were required to undertake more than one of these activities.

Of those completing such mandatory requirements, the majority found them beneficial, with the most common reasons given being improving one's skills, keeping the person 'on track' and assisting the candidate to develop professionally.

The Processes of Defence/Examination

The majority of those surveyed were required to undertake some form of defence or examination, including an oral defence of their doctoral work (52% of those surveyed), a combination presentation and defence (4%), and written examination (16%). There were 19% - mainly from non-North American countries – who were required to have a formal thesis examination.

Those who experienced difficulties with the defence/examination process were predominantly enrolled in Canadian and US universities, with the commonly cited problems being difficulties with examination panels, the time the process took, stress, having to 'fight' the faculty, secrecy and 'politics', and the amount of writing required for written exams.

Once again, we are dealing with a successful cohort, and the experiences of unsuccessful candidates are likely to have been more severe and quite possibly personally devastating.

Personal Feelings at Completion

There were three broad types of personal feelings experienced at doctoral completion, one being positive, one ambivalent and experiencing mixed emotions, and one being predominantly negative.

In the positive category, there were comments about 'feeling good', feeling relieved, feeling elated and proud and feeling fulfilled.

In the ambivalent group there were those who described their 'mixed emotions', those who described themselves as both tired and happy, some who had experienced a feeling of anti-climax and others who felt both excited yet fearful of the future.

In the remaining group were those who experienced predominantly negative feelings on completion, including poor health and stress and some who felt depressed, angry or experienced low self-esteem which they attributed to their doctoral experiences.

Stages and Experiences Since Graduation

Of those taking part in the study, a minority admitted to feeling somewhat 'lost' and unsure following graduation. Obviously, with the doctorate being such a central part of peoples' lives for several years or more, there is bound to be something of a vacuum when it is completed. While some said they had felt better about themselves and had been on a 'high' since graduation, there were others who felt unsure of themselves and even professed to feeling a 'fraud' and imposter with 'Dr' in front of their name. Some said they felt worse about themselves and were bitter and cynical about their doctoral experience and that it had exacted a high personal cost.

The majority, however, had simply got on with their lives, having derived various benefits from the completion and possession of a doctorate.

Dissemination of Research Findings

A key finding of the study was the disappointing extent to which the efforts of those surveyed had translated into published material for the benefit of others.[2] Only 43% of participants had managed to disseminate the findings of their doctoral research, and for some of these people, this dissemination was very limited, such as lodging their dissertation in a library or having a dissertation abstract published. Other means of dissemination were presentation of a conference paper (over a third of those surveyed), followed by book chapters and books.

There were 42% of those surveyed who said they had experienced problems in disseminating their research findings. Some had had papers rejected, while others

[2] See Dinham & Scott (1999), for elaboration of the dissemination issue, including the results of a follow up study.

said they had received no encouragement from supervisors to disseminate. Some experienced methodological problems preparing their work for publication, while some said they simply lacked the time to publish from their doctoral work. One group (14%) said they were reluctant to publish anything from their doctorate.

Overall, less than one-quarter of those surveyed expressed satisfaction with the extent to which their work had been disseminated, a disturbing outcome considering the effort invested in gaining the doctorate and its intended purpose of adding to the store of human knowledge through 'original' investigation.

A theme running through responses to this question was the lack of follow up to the completion of the doctorate, with the supervisor/candidate relationship perceived to have ended with the award of the degree and little effort or support provided to the neophyte researcher to promulgate his or her findings. Inherent in many of the comments made was a lack of confidence and knowledge of how to go about dissemination.

Overall Effects of the Doctoral Experience

In summing up the overall effect that their doctoral experience had upon them, over two-thirds of those surveyed made positive comments. The major positive benefit or result was seen to be intrinsic, with enhanced self-concept and self esteem-being being most commonly mentioned, followed by changing others' views of and regard for them and the more extrinsic issue of enhancing one's career prospects.

For some, the overall effects of the doctorate were mixed, with, for example, a combination of the above and ill-health thought attributable to the stresses and strains of completing a doctoral program.

However, 15% of those surveyed viewed the overall effects of their doctorate in exclusively negative terms, with mention of health and physical problems, emotional problems, and relationship problems with both family and friends.

Clearly, despite their success in completing a doctoral program, some felt that the cost had been too great.

Career Changes and Professional Influences of the Doctorate

Almost three-quarters of those surveyed saw their doctorate as making a positive influence on their career. Major benefits cited included widening of career opportunities, obtaining new employment and gaining a promotion or salary increase within the same occupation.

A small number said they had put their career 'on hold' temporarily following their doctorate, usually for family reasons, while there was another group who noted negative career consequences, half of whom had yet to obtain a job. Two people said their career had suffered because they were now perceived as being 'over qualified'.

In considering professional expertise and practice, as opposed to career outcomes, a majority saw professional benefits flowing from their doctorate, including obtaining a

new appointment or position, enhanced professional capacities, increased status and respect within the profession and greater prospects. A small group saw a doctorate as an essential requirement in their profession.

In supporting the notion that a doctorate is primarily a vocational qualification, the vast majority of those surveyed (88%) cited improvements in their professional practice attributable to their doctoral studies, including enhanced supervision skills and a changed and improved approach to their work.

There was only a very small group who gave negative responses to this issue, including such things as the subject area of the doctorate not being relevant to their current professional practice, or that the person was already working at the desired level of performance prior to the doctorate, which had thus not added anything to their professional capabilities.

There were, however, a number of people who said they used their doctoral experiences as an object lesson of what *not* to do in their professional practice, especially in regards to doctoral supervision.

What is Needed for Doctoral Success?

What then does our sample of successful doctoral candidates see as being essential for doctoral success? Although most people gave a number of responses, overwhelmingly, what was seen as being required were the personal qualities of tenacity and perseverance (91% of those surveyed). This was considered even more important than intellectual ability (mentioned by 37% of those surveyed). Other personal qualities deemed necessary for doctoral success included interest and passion, clear goals and sense of purpose, self-esteem and personal management capacities. Also mentioned were the qualities of creativity, a sense of humour, emotional maturity and writing skills.

As to factors other than personal qualities contributing to doctoral success, a majority of those surveyed mentioned the role played by the supervisor and department, the support of family and friends, the provision of resources, finances and equipment by the department or faculty and matters relating to suitable topic selection.

Other Comments Made By Respondents

There were often lengthy comments made by those surveyed in the final open-ended section of the survey, often forcefully and emotionally made, the survey obviously having awoken and brought to the surface matters still of great emotional importance.

As mentioned previously, there was a group who asserted that the cost of their doctoral experience had been too great, and that they would never contemplate doing the same thing again if they had their time over. There was also once again a group with mixed feelings, having gained and lost from the undertaking. This group and others made many criticisms of doctoral programs – some structural and procedural and others interpersonal - which are taken up later when the issue of improving doctoral programs is canvassed.

However overall, what comes through in these comments and others towards the end of the survey responses is a feeling that the doctorate is a bitter-sweet experience for many. Apart from the experiences encountered during a doctoral program, there is no doubt that the act itself changes both the individual concerned and frequently those around them. Some of these changes are welcome while others are painful and distressing. Clearly, the doctorate is a major individual life event, representing as it does the pinnacle of academic achievement for the bulk of those passing through the process.

While we used the analogy of mountain climbing in our introduction, for some, a better metaphor might be a battle, where there are casualties, physical injury and emotional hurt , winners and losers, and with the euphoria and relief of victory counter balanced to varying degrees by realisation of the costs incurred. For others, if we are permitted to mix our metaphors, the process of undertaking a doctorate is relatively plain sailing, a demanding, but largely straightforward journey.

Discussion: Improving Doctoral Programs and the Doctoral Experience

The following suggestions and considerations for improving doctoral programs, easing the burdens on doctoral candidates and their supervisors, and ultimately facilitating doctoral success can be seen to be grounded in the study findings. However, they will also be familiar to many other participants and researchers involved with higher degree research.

That said, we have no 'magic wand', nor are we prescribing 'ideal' procedures and practices. That can never be achieved, given the diversity of people, disciplines and contexts involved with the fascinating and dynamic matters of scholarship, teaching, learning and research. As a result, we acknowledge that some of what follows might read as 'parenthood' statements, yet each is also of vital importance and deserves recognition and where appropriate, action.

A Pro-active, Sympathetic Approach to Student Recruitment

Some of those surveyed told of being treated indifferently at best when inquiring about entry to doctoral programs. Often, it was a single 'kind act' such as a faculty member responding to a letter or inviting a student to visit which caused those concerned to choose a particular department, university or supervisor.

It is not enough to produce 'glossy' prospectuses, advertise scholarships or to place information on university home pages. Prospective students want their questions answered and they want to be treated as an individual in an humane manner. Because of the mystique of the doctorate, many will be unsure of themselves and will need sympathetic guidance and helpful, accurate advice. This particularly applies to those from minority groups, those lacking role models and mentors, and others who might feel marginalised.

In the context of the pace and pressures of modern higher education, it may be that the mentoring of undergraduate and postgraduate coursework students with potential for research study and the attraction of suitable students from outside tertiary institutions

has suffered, particularly if academics are under pressure to teach more and to take on greater workloads generally. Who knows how many potentially successful doctoral students are deterred or turned away because of the initial reception they receive?

Induction to the Academic Community and the Relevant Discipline

A key issue for students is feeling that they are accepted as part of a community of scholars, and in turn, feeling that they are members of a discipline or area of human scholarship. At a basic level, this includes orientation to the university, faculty and department and its geography, personnel, facilities and procedures, but it also includes the more intangible matters of being accepted as a person with strengths, needs and desires – a person who needs to eat, sleep, work, recreate, relate to others and to dream.

The arcana of various disciplines takes time to appreciate and understand and more experienced staff and students can assist greatly in helping the neophyte doctoral student to more quickly come to grips with the histories, rituals, norms and ceremonies of institutions, organisations and branches of study, and to feel valued and accepted.

This integration can only be institutionalised and standardised to a certain extent. Beyond that, it comes down to individuals being prepared to spend the time to get to know each other, to listen and act for the benefit of others and to pass on key advice such as what conferences to attend and how to prepare an abstract, for example, as well as more mundane but equally significant matters such as being invited for a meal.

Meeting the Needs of a Diverse Student Population

Related to the above issue, every student is different and each comes to a doctoral program with different strengths and weaknesses and personal qualities. Each also has a different background and varying responsibilities. It is a conundrum that those students most at risk and most in need of help may be least likely to receive it due to such things poor language skills, their sex or sexuality or socio-economic circumstances.

The doctorate, unlike lower levels of study, is a fair more individually driven undertaking and efforts, both personal and procedural, need to be made to overcome the feeling of and real isolation many doctoral students experience. Taking courses, attending seminars, mentoring arrangements with other students and staff and engaging in collaborative undertakings are all measures which have the potential to help overcome isolation. This is even more important, of course, for the growing numbers of part-time and off campus students who will feel even less part of a learning community.

The challenge for over-stretched and over-committed faculty members is to make and take the time to interact with their own and other students. Those surveyed were very critical of faculty they perceived as keeping them at arm's length or even ignoring them. Brief, irregular meetings are not the mechanism to meet the needs of either students or staff.

Better Linking of Student and Faculty Members

Allied to the above issues, the allocation of supervisors and others involved with the supervisory process to students needs greater attention. The fact that in some cases students have to almost beg faculty to take them on is not healthy and the fact that clashes of methodology and personality seem to occur so frequently necessitates a far more systematic and sympathetic approach to the issue. In this respect, the use of panels of supervisors rather than an individual who might leave or be absent for lengthy periods, has some potential, if the panel members are actively involved and available to share their expertise.

Preparation and Support for Supervisors

Having completed a doctorate is not adequate preparation for becoming an effective doctoral supervisor any more than being a successful student is preparation for being an effective teacher. The process of 'training' doctoral supervisors is extremely *ad hoc* and often left to the individual to acquire 'on the job', if at all.

In the study, students complained of supervisors who were unsure of university procedures, unfamiliar with methodology beyond that they had employed in their own studies, and too busy to provide quality assistance because of the pressures on them to publish, teach, administer and obtain tenure.

Institutions need to monitor student concerns and faculty members' needs, and to factor these into staff training programs and faculty procedures. There is a strong argument for some form of qualifying period and qualification for becoming a doctoral supervisor, and some universities have already moved in this direction. Whether this comprises some form of 'apprenticeship' model or some other arrangement is best left to the individual institution, but something clearly needs to be done to improve the quality of doctoral supervision, which is such a key factor in doctoral completion and student satisfaction with doctoral programs.

Clarification of Roles and Expectations

Is the major function of a doctoral program teaching and learning, training and preparation for research, or the expansion of human knowledge through the conduct of 'original' research?

Before the roles and expectations of the individuals concerned can be considered, we need to consider the overall, purpose(s) of the doctorate, which may well differ from discipline to discipline, from context to context and from model to model, i.e., 'professional' doctorates from PhDs, research only doctorates to the 'north American model of courses plus dissertation. Departments, faculties, universities and even disciplines thus need to reconsider what are the intended outcomes of 'their' doctorates. Once these outcomes are identified, clarification and stipulation of the roles and expectations of those involved with doctoral programs needs to occur. Only then, can these be communicated clearly to all concerned.

Thus, when students enter a doctoral program, they can receive notification of and discuss with faculty members and others exactly what is expected of them and what they can expect of the university in clear and unambiguous terms. The 'learning contract' can then be enacted, particularly that the between student and his or her supervisor(s). However, this is a minimum expectation and does not preclude additional arrangements which might be made as a result of negotiation between the relevant parties such as frequency and nature of contact, attendance at seminars, attending or taking classes, etc.

Power Relationships and Politics

One of the most potentially damaging yet difficult to deal with issues is that of politics and power relationships. Many of those surveyed told of being largely powerless and at the mercy of those controlling their destiny.

The clarification of roles and responsibilities mentioned above will assist in this regard, as will more careful attention to the allocation of supervisors and the use of panels of advisers mentioned previously. However, means also have to be provided whereby students who feel themselves experiencing discrimination, lack of useful support and guidance, obstruction or indifference can make their feelings known and have their concerns acted upon. There needs to be formal measures such as annual reports and the like, but students and faculty often feel reluctance to be frank in such reports and thus there need to be other avenues for students which do not involve 'going over' their supervisor's 'head' which might cause further problems.

The concept of another member of faculty who might act as a mentor and mediator has potential, as do student associations, someone acting in the position of 'Dean of Students' or the use of the position of ombudsman/woman.

Clashes of methodology, culture, gender, sexuality, and so forth can not be eradicated, but they can be recognised and the damage they cause reduced through sympathetic handling of such situations, rather than ignoring or denying them.

Flexible Pathways

As noted, not everyone enters a doctoral program with the same needs, abilities and circumstances, and varying disciplines and programs have different requirements. Some those surveyed found the mandatory aspects of their programs beneficial, while others saw these as superfluous or a waste of time. Qualifying programs and mandatory aspects of doctoral degrees thus need to be tailored to suit the needs of individual students. It is acknowledged that some intending or neophyte doctoral students will not know at this stage 'what is good for them' and may well appreciate later what they have been required to undertake. Why certain requirements are necessary or desirable thus need to be discussed with individual students.

The key here is thorough assessment of the capabilities, experience and deficiencies of intending students, careful matching of student to supervisor(s) and a negotiated program that meets the needs of all concerned, the intended area of study and the discipline generally. Thus, was is advocated is not 'one size fits all', but flexibility. To this end, some students pursuing the 'British model' of thesis only may well need

additional courses and support, while those undertaking the 'North American model' of courses plus dissertation, as well those engaged in other models through 'professional doctorates' and the like, might well need a more 'tailor made' program.

Additionally, there needs to reconsideration of 'blanket' rules such as minimum periods of on-campus attendance. Some will need this, others will not, while modern developments in information technology may call into question the simple dichotomy of 'part-time' and 'full-time' candidacy.

Feedback and Validation

Students at all levels want and need timely, constructive feedback of their progress. Obviously, with the more individualised and in many cases isolated nature of doctoral study, which can take years to complete, a lack of effective feedback can be problematic. Some of those surveyed highlighted difficulties they had experienced in this area. In many cases, these were compounded by other problems such as arranging regular meeting times with supervisors who were pre-occupied with their own research, teaching and personal lives or who lacked interpersonal skills.

As well as feedback, students need validation and confirmation of the value of their work and the approach they are taking to accomplish it. Both feedback and validation can be facilitated through regular 'events' such as seminars, colloquia, conference presentations and the like. It is important that these do not become 'trials' where an inexperienced person can suffer public humiliation and mauling and thus the support of supervisors, other faculty and fellow students is needed. Handled correctly, such measures can be very valuable and can also aid the work of the supervisor, who also needs feedback, validation and further development of professional expertise.

Maintaining Relationships Beyond Completion

One of the most disturbing aspects of the study findings were those related to research dissemination, which only a minority of those surveyed had managed to achieve (Dinham & Scott, 1999).

In part, this situation was found to be attributable to a lack of advice and support provided to doctoral students as to how to go about publishing and disseminating their findings, but it is also attributable to the fact that for many students, the university-supervisor/student relationship is perceived to end at graduation or completion. There are good reasons as to why this might be so, but it is to the advantage of all concerned that the findings of doctoral study are as widely disseminated as possible. To this end, universities and departments need to formalise support structures for doctoral students both within and following doctoral programs to assist them with dissemination.

There are numerous other reasons why alumni should maintain contact with their universities and colleges following graduation, one of which is that the experiences of successful doctoral candidates can be very helpful to both current students and faculty members.

Other Comments

The above issues are not exhaustive, and the keen and experienced reader will detect others within the material presented from the study which are also of importance. For example, we have not commented on the issue of financial difficulties which a large proportion of those surveyed experienced.

What we are essentially arguing for is a balanced approach between structure and process, the needs and qualities of individuals, and the inter-personal intangible dimensions of the doctoral experience. We are not advocating 'spoon feeding' or 'hand holding', but rather sympathetic, informed support and guidance for what is a major and largely individual undertaking.

In reading the case histories of those who took part in the study, the need for recognition of the 'whole person' emerges as a major theme and consideration, equal in importance to course structure, processes and procedures.

Conclusions and Future Directions

We can better understand the processes and dynamics of postgraduate research, but as Acker has noted, we can never make it entirely predictable or homogeneous (in Holbrook & Johnston, 1999: 91).

There is an argument that the doctorate needs to remain a severe challenge if standards are to be maintained and real value is to be gained from it, but there is value too in ensuring that where people fail to complete the doctoral 'journey', it is because of intellectual deficiency and lack of application, rather than some of the other factors largely outside the control of the individual which can hinder and prevent successful completion.

We need to continue to explore what is a peak intellectual activity and accomplishment for many interested in teaching, learning and the pursuit of knowledge and understanding, and to continually strive to improve doctoral programs and the processes, structures and support we provide for them. High rates of non-completion and lengthy completion times for those who do succeed suggest we still have some way to go.

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